

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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BALTIMORE, JULY 30, 1908.

GRATIFYING.

Mr. E. E. Blake of Blake, Blake &
Low, El Reno, Okla., writes to the MAN-
UFACTURERS' RECORD as follows:

You have every reason to congratulate
yourself upon success as a disseminator of
information. You may not know it, but the
MANUFACTURERS' RECORD is quoted as often
in this country by the daily and weekly
press as is, I think, any other periodical of
the day.

SAFE AND SANE POLITICS.

Regardless of party platforms, re-
gardless of personal predilections as to
Presidential candidates, the men of af-
fairs of the country, the farmers, the
laborers, the merchants, the mechanics,
the manufacturers and all others de-
pendent upon law and order in govern-
ment, should insist that candidates for
Congress in their respective districts
shall be men acquainted with the Con-
stitution of the United States, having
respect for the Constitution and de-
termined to maintain the Constitution
against all odds.

CONTEMPT OF COURT.

Rampant lawlessness in this country
is one of the flagrant manifestations of
contempt of court. Contempt of court
is nourished by unrestrained assaults upon
the courts. It is one of the gravest
menaces to the integrity and the sta-
bility of American institutions. For
that reason—

However legal and proper the intent
of the reversal by the United States
Circuit Court of Appeals of the decision
by the Federal court at Chicago in the
case of the Standard Oil Co. of Indiana
may have been, however greatly needed

may have been prompt and adequate ac-
tion upon the proceedings leading up to
the decision, the method adopted by the
Court of Appeals in making its reversal
the medium of criticism of another
court was pre-eminently unjudicial and
prejudicial to the administration of
justice.

It was as reprehensible as its com-
plement, its logical complement, the im-
plied criticism of the Court of Appeals
in the characteristically gratuitous and
unconstitutional announcement by the
occupant of the Presidency of the United
States of his opinion as to the guilt of
defendants in a case that is still within
the province of the courts.

The Constitution of the United States
provides for an orderly administration
of justice. It marks out the lines of
safe conduct in dealing with improp-
riety in Federal office, whether admin-
istrative or judicial. Under the Con-
stitution there is no provision for a
Jeffreys or a Cromwell.

SAPPING AMERICAN STRENGTH.

Mr. Edward Wisner of New Orleans,
La., a pioneer in the work of reclaim-
ing wet lands in the South to agricul-
ture, writes to the MANUFACTURERS'
RECORD as follows:

I wish to commend your editorial en-
titled "On Crutches," wherein you discuss
the National Drainage Association. In so far
as the National Drainage Association at-
tempts to create a sentiment for the reclama-
tion of swamp lands it has my hearty sympathy,
but I believe its main purpose to be an at-
tempt to get Government aid, and with this
motive I have no sympathy whatever. I
can see no reason why the Government
should drain my wet lands any more than
it should clear the stumps from a potato
patch for a Maine farmer. Millions of acres
of land now in cultivation in the United
States have been put in cultivation at a
greater expense of time and muscle than is
required today to put in cultivation a large
percentage of the wet lands in the United
States. I am glad to see the MANUFACTUR-
ERS' RECORD, with its undoubted great influ-
ence, take this position.

Every man who knows the great
value of self-dependence and initiative
as American assets and understands
how influential in strengthening them
has been the enterprising persistence
that has brought millions upon millions
of acres of land in this country into cul-
tivation, will agree with Mr. Wisner's
view of the proposition of Government
aid for the reclamation of swamp lands.
The lands should by all means be re-
claimed. But the less the Government
has to do with the reclamation the bet-
ter it will be for the people of the
United States.

Grover Cleveland epitomized the true
American spirit in asserting that, though
the people should support the Govern-
ment, the Government should not sup-
port the people. Every act of a State
yielding a duty in acceptance of aid
from the general Government weakens
just that much some right of a State
and sets an example to citizens to ne-
glect their duties, notwithstanding how
their individual rights may thereby be
weakened. The maintenance of indi-
vidual rights of citizens and the culti-

vation of their sense of individual duty
are among the most pressing neces-
sities of the times. At the recent White
House "Conservation Congress" a great
ado was made about the preservation
of natural resources of the country. The
whole trend of the "Conference" was
against the conservation of the coun-
try's greatest resource, the self-de-
pendence of the individual citizen. Gain
in material wealth counts as naught
against loss of individuality.

DEMAND FOR FAST-FREIGHT SERVICE.

The Southern Railway Co. recently
had built at the Pittsburg plant of the
American Locomotive Co. several heavy
engines for fast-freight service, and
while they are not as weighty as some
other engines of recent construction,
they are remarkable for the fact that
although of the consolidation type, the
driving wheels are more than 5 feet in
diameter, or 63 inches, to be exact;
their boiler pressure is 200 pounds, and
their cylinders are 21 inches in diam-
eter, with 28 inches stroke. Of the total
weight of each engine, which is 190,500
pounds, 165,000 pounds rest on the driv-
ing wheels, making their tractive power
great.

These locomotives indicate the growth
of demand for fast-freight service in
the South as well as in other parts of
our country. On many railroads fast
freight has been handled and is still
handled by passenger engines, the trains
being made sufficiently light to be
hauled by them, although on some
roads it is possible for a large passen-
ger engine to pull a heavy freight train
at high speeds, because of the favorable
grades, but these engines just built for
the Southern are made to handle heavy
trains on varying grades without the
aid of helpers, which would be needed
at certain points if passenger engines
were used. The size of the driving
wheels on these new locomotives is
large for a consolidation type of engine,
but the boiler capacity of the machines
and the dimensions of their cylinders
promise that they will be amply power-
ful to secure the most good in the way
of speed and pulling power from the in-
creased size of the drivers, and it may
be expected that the Southern Railway
will make some records in moving fast
freights.

The development of a real fast-
freight service in this country is com-
paratively recent, although abroad, par-
ticularly in England and Scotland,
high-speed freight service has been a
feature with the principal trunk lines
for many years. Perhaps the best ex-
ample of high-speed freight service in
America can be found in the fruit and
vegetable trains run from the South to
the North and East by the several
Southern roads reaching the fruit and
agricultural districts of Virginia, the
Carolinas, Georgia and Florida. They
are probably the best in freight service
that we have to compare to the trains
in Great Britain, which run from Scot-

land points down to the London market
carrying fish and game, which must
needs be rapidly transported; indeed,
these trains are scheduled to run as
fast as passenger trains.

Considering the progressive efforts
which are being made by American
roads to meet the demand for the best
freight service, it would seem surpris-
ing that suggestions for an advance-
ment of a few mills in freight and pas-
senger rates should raise an outcry
against the transportation companies,
and that without contemplating the in-
flexible attitude of railroad employes
toward each and every proposition look-
ing to a reduction of wages. Truly, the
railroad companies generally have kept
up with the demand for facilities, not-
withstanding that periods of congestion
have occurred when extraordinary
rushes of traffic demanded that every
wheel be put in motion.

Moreover, the demand for fast-freight
service is bound to continue and ex-
pand. It will have to be met. If pro-
viding the needed facilities compels
greater expenses, objection cannot
justly be made to a reasonable increase
of rates. America has long enjoyed the
cheapest railroad service (especially in
freight facilities) in the world, yet it
is argued by experts that to raise the
rates to figures which would be profit-
able to the companies, in view of in-
creased cost of labor and equipment, as
well as of supplies, would practically
have no effect upon the retail prices of
goods generally, an argument which is
readily understood by those who have
studied railroad tariffs and the effect
upon earnings of an increase of several
mills, or even of one mill, or less, in
the case of certain bulky articles, such
as coal or grain. Besides, leading rail-
road men have recently declared
that increase of freight rates is abso-
lutely essential if the railroads are to
be maintained as they have been and as
the public insists that they shall be.

What the Southern Railway has done
to meet fast-freight needs is being done
and will be done by other companies.
This progress is indicative of what the
public wants. If there are any people
on earth who generally think that
there is nothing too good for them they
are the people of the United States.
They use Pullmans when folk of other
countries would use day coaches, and
they pay the price for the comfort with-
out a murmur. It is reasonable to
expect that they will be equally willing
to pay for better and better freight
service, provided that the habitual
fomenters of strife will let up in their
mad campaign of hostility against cor-
porations.

F. Ulrich of Buenos Aires in a letter
to the MANUFACTURERS' RECORD says:

In agricultural machines, lumber, kerosene,
the United States holds the business, and
can do the same with cotton yarns and
cotton goods if they tried hard enough. Iron,
steel, wire are being exported from the
States some, but the majority still comes
from England, Germany and Belgium. In re-
gard to tools, such as hammers, hatchets,

etc., the American woods are preferred in spite of the higher price they have to bring.

There is a vast field in South America for the development of trade. What is most needed just now is the establishment of lines of steamships to South America under the American flag, in order that we may be in closer touch with that region.

IMPORTANT STEP IN WOOD ECONOMY.

The appointment of a committee to consider and report upon the preservation of the various kinds of wood used in railroad construction is one of the wisest moves ever taken by the American Railway Engineering and Maintenance of Way Association. In addition to accomplishing something definite toward preventing a great waste of valuable material, it also shows the public that railroad officials generally are awakened to the danger which threatens the great important enterprises with which they are connected. The seeming indifference of railroad companies for so many years with respect to the future wood supply was to many persons almost incomprehensible, and could be understood only upon the presumption that their duties in operating the lines under their charge so engrossed them that there was no time to think about preserving and sustaining sources of supply, but that such considerations were tacitly left to those who were engaged in furnishing products of the forest.

This country for more than 400 years, or ever since its discovery by civilized people, did not have to concern itself about such things as the conservation of timber supplies. Much of its area was forest land, and what we read of the earlier settlers gives the impression that most of them, if not all, were obliged to spend considerable time in clearing woodland to provide for agriculture. Until a very recent date some large regions, such as the State of Mississippi, were practically vast forests, but the great demand for lumber of all kinds, not only in railroad and telegraph construction, but in all lines of building, has caused them to be much cut into. This heavy call for wood led to the purchase of large tracts by comparatively few individuals, and the concentration of the lumber supply under the control of various firms and companies, coupled with the increased demands, sustained prices so that the questions of future forest growth and timber preservation were forced upon the consideration of consumers, among whom the railroad companies are of the largest. That they will succeed in doing something of advantage in the present situation may be accepted as assured.

A list of the members of the special committee mentioned shows the names of experts in engineering, forestry and wood preservation. The leading railroad engineers of the United States are members of the association which appointed it, and it has in turn appointed subcommittees to consider various lines of work which will secure desired results. There are more than 100,000,000 ties used each year by our railroad companies, and their average term of usefulness, according to data collected by the Department of Agriculture, is not more than six or seven years. But the use of preservative methods and materials, while comparatively new to this country, are familiar to Europe, where the conservation of forests is maintained by a system which has been enforced for

a long time. By properly treating ties with preservatives their terms of usefulness may be extended to 15 or 20 years, and perhaps more, with certain woods. But it is also necessary to use tie plants or some other devices to prevent the rails from cutting into the ties and wearing them out before decay begins. Thus the cost of railroad construction will be increased not merely by the timber-treating process, but by the use of additional metal, yet this will secure ultimate saving. The preservation of bridge timbers, piling, fencing and other wooden factors in railroad construction will also be adopted for purposes of economy.

While it is somewhat late to take up the question of preserving lumber used by railroads, much good may be confidently anticipated therefrom. This is particularly satisfactory to reflect upon, because some years must elapse before any extensive benefits can be reaped from the work (small in extent as yet) which has been done for reforestation. A very few of the larger railroad companies have set out young trees in groves to provide for future tie supplies, but the gathering of any crop from these woodlands may be expected at only distant dates. There is no reason also why preservative treatment should not be followed with advantage in the case of woods in all lines of building where that material would be exposed to the weather. Considering the saving which is insured by the use of preservatives, it would appear that considerations of economy would compel their use.

It may be that the railroads are only beginning a practice which may become general wherever wood is used in out-of-door work.

GUARANTEED BANK DEPOSITS.

The *Daily Oklahoman* has a grievance against the MANUFACTURERS' RECORD, or, rather, thinks that it has a grievance. It says:

The MANUFACTURERS' RECORD of Baltimore thoroughly agrees with itself in almost every issue that the people of Oklahoma are not capable of self-government. It particularly dislikes the State bank guarantee of deposits law now operative in Oklahoma. * * * The RECORD bases its objection upon an assumption that the guarantee law promotes loose banking and is a bid for dishonesty. By the same token fire and life insurance are to be condemned as promotive of carelessness.

Part of the grievance ought to disappear when the *Oklahoman* reads the following from a letter to the MANUFACTURERS' RECORD from a business firm of Oklahoma:

The present agitation against capital is not as popular in this section of the country as a great many people in the East think it is. It is true the agitators have the upper hand in our State now, but our last election was not a fair sample of our views. Very few of the members of our last Legislature are going to run for re-election, for they know the people do not approve everything they did, although the machine at Guthrie enacted such a primary law that it practically disfranchises all but one party for the next two years, and, maybe, after that time, too. We are awakening to the fact that the men around whom our hopes centered are not giving very much thought to the good of the people, but are only halting them while one of the rankest political machines in the Union is being fastened on us for a long time to come.

We hope that the pessimism in the latter part of this letter will not overcome the spirit shown in the opening sentences, the hopefulness that the time may soon come when the people of Oklahoma may free themselves from the agitators, as they are perfectly capable of doing. In the meantime, criticism of the acts of politicians of a State cannot be justly construed into a charge

that the people of the State are incapable of self-government. The criticism of the politicians is for the encouragement of the people to exercise their power of self-government.

The other part of the grievance ought to disappear when the *Oklahoman* considers that there is hardly any analogy between existing methods of fire insurance and life insurance and State insurance of bank deposits. If the State should undertake to insure its citizens against loss by fire, we are quite sure that the grossest kind of carelessness would be induced and that only a few years' experience would be required to bring to vigorous and effective protest against such State insurance the mass of property owners and taxpayers of the State.

In this connection it may be well to refer to the contention of the *Daily Record* of Columbia, S. C., that it would be a good thing for the people if the guaranteeing by Government of bank deposits would place banking "somewhat on the same footing as the postal service." It says:

As regards the postal service, there is nothing left for individual initiative and responsibility, and it is a fortunate thing for the people that this is so, for were it otherwise very expensive and inefficient would be that service.

Has the *Daily Record* forgotten that there is a persistent plan within the circles of administration of the postal service to assume a virtual censorship of matter passing through the mails? Has it forgotten the attempt to give a Postoffice Department official the right to decide what kinds of newspaper shall be carried as newspapers and to decide that a paper, in order to have the second-class privilege, must have so much advertising matter to so much reading matter? Such censorship granted, how long would it be before all matter passing through the mails would be subject to like censorship?

If it is thought necessary to entrust to Government a matter such as the postal service, that trust must be everlastingly watched by the people lest it be abused to the injury of the people. The creation of that trust is no excuse for turning over to government every activity of the people. It is one of the least excuses for advocating the guaranteeing by Government of bank deposits.

SAFETY ON RAILROADS.

It is a remarkable and gratifying fact that the railroads are delivering their passengers in safety and have been for most of this year. Accidents are rare and fatalities rarer still. Let us hope that the management of our railroads will after a time be as skillful as that of England.—*Children and Charity*, Thomasville, N. C.

When the people cease to put a premium on inefficiency of labor as they have been doing of late years, when honesty of service is regarded as essential as honesty in finance, when the man or boy who steals his employer's time is regarded in the same way as the one who steals his employer's dollars, when railroad managers recognize that few business houses would ever succeed with proportionately as many inefficient, lazy, discourteous employees as railroads have on their payrolls, when the people are willing to pay freight and passenger rates sufficient to enable the roads to build better roadbeds and more double track and have better rolling stock, when the silly talk about watered stock is ended and people realize that English roads are capitalized at an average of nearly four times the average in this country, and that the average of English freight rates is

nearly four times as our average, then we may begin to see better and safer railroads and fewer accidents involving frightful loss of life. Just now the American people seem to prefer cheap roads, cheap rates and cheap human lives to higher rates and a greater safety to life and limb.

CHEERED.

The Bluff City Lumber Co. of Pine Bluff, Ark., informs the MANUFACTURERS' RECORD that our expression of July 16 as to the outlook of the country was so optimistic and so suited to its views that it is sending out thousands of copies of the comment in its mail.

Harry K. Ivens, local sales manager, New Orleans, La., Union Iron Works, manufacturers of steel boilers, Erie Pa., writes to the MANUFACTURERS' RECORD:

It affords me a great deal of pleasure to renew my subscription to your valuable paper. The MANUFACTURERS' RECORD is a most welcome weekly visitor and a splendid paper in every way, and you have our most earnest wishes for continued success.

Mr. R. H. Zachary of the Zachary Lumber Co., Oconee, Ga., writes to the MANUFACTURERS' RECORD:

We regard the MANUFACTURERS' RECORD, of all publications with which we are familiar, the best friend to the South and Southern industries, and think it is so regarded by all fair-minded men who read it.

THE SOUTH IN FURNITURE MANUFACTURING.

The making of furniture is one of the lines of manufacture which has attracted general attention to the South, as the industry is one which has a wide distribution of product, the output of the Southern factories finding markets in very widely separated sections. This industry has made rapid growth in the South, and has assumed such proportions that some of the Southern towns now rank with the leading furniture centers of the United States. New plants are constantly being added to those in successful operation, and much additional capital is finding investment in this manner. In talking of the development of this industry in the South Mr. M. V. Richards, land and industrial agent of the Southern Railway Co., recently said:

"The South has made wonderful progress during the past decade in the manufacture of furniture. When the Southern Railway Co. was organized in 1894 there were very few furniture factories in the several States through which its lines run. Today there are about 250 furniture factories in the States south of the Potomac and east of the Mississippi rivers, and the product of many of these factories finds profitable markets in the East, North, Northwest and Pacific coast region in competition with old-established furniture-manufacturing centers of the East and North; in fact, the manufacture of furniture is one of the very important industries of the South, and it is safe to predict that this industry is merely in its infancy. We have on the line of the Southern Railway single points where there are about 50 furniture factories, all of which have been developed within 15 years.

"The great variety of timber found in the South affords the Southern furniture manufacturer valuable lumber at the minimum prices. It is found that the supply of labor is adequate and desirable, and the transportation facilities are particularly satisfactory. Southern railroads make rates which enable the manufacturers of the South to reach the best furniture markets of the country. A large proportion of the capital employed in the furniture industry is furnished by South-

ern people, or by manufacturers who have changed their locations from the North to the South. At first it was the custom to manufacture the cheaper grades, but in recent years many of the factories have taken up and are running on higher grades. It is not uncommon to see whole trainloads of furniture manufactured in factories on the Southern Railway carried over that line to profitable and desirable markets.

"While the furniture industry has had a marvelous impetus in the South, other lines of woodworking factories have been established and are doing remarkably well.

"Many cities and towns tributary to the Southern Railway system hold out substantial inducements to furniture manufacturers seeking new locations. Any reasonable proposition made by manufacturers will receive due consideration. Excellent sites and additional capital are obtainable. While just at present furniture factories are not overwhelmed with orders, the industry is bound to be enlarged, and this is an exceptionally good time for the management of factories in other sections to 'cast about' for new and desirable sites in the South. The indications are that more woodworking plants will be established in the South during the next 10 years than were located during the past 10-year period."

AN OGDENITE TENTACLE.

From Montgomery, Ala., emerges the suggestion, with all the earmarks of a feeler, of a "Conference for Education in Alabama," to be held next spring, looking to the assembling of business men and professional men in the interest of education in the State. The suggestion contains the statement that "Outside influences have been at work for several years in whatever way possible to aid the schools of the South, and it is now thought that the time has come for the citizens of the State to foster and encourage all lines of modern development themselves." If there has been any halting on the part of citizens of the State in proper work for education it has been due to the obtrusion of "outside influences" in "aid of the schools of the South," notoriously the influences centered in the Ogdén Movement. And it's dollars to doughnuts that those identical influences are the ultimate influences behind this tentative plan for a business men's convention in Alabama next spring. They have tried it in other States, but the real business men of the South have not been especially responsive. Business men usually have their wits about them.

THE COTTON MOVEMENT.

In his report for July 24 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 328 days of the present season was 11,318,444 bales, a decrease under the same period last year of 2,008,108 bales. The exports were 7,263,174 bales, a decrease of 1,049,201 bales. The takings were, by Northern spinners, 1,845,429 bales, a decrease of 676,663 bales; by Southern spinners, 2,194,548 bales, a decrease of 172,662 bales.

FOR SOUTH CAROLINA.

Hon. E. J. Watson, Commissioner of Agriculture, Commerce and Immigration of South Carolina, has added to the extremely valuable work which he has done for the advancement of his State ever since he was inducted in the office, less than five years ago, a pamphlet of 70-odd pages containing an official list of agricultural and other lands in South Carolina which are offered for sale to settlers through his department. The list refers to nearly 250 tracts of farming and timber lands, ranging in area from 10 acres

to 20,000 acres, and an abstract description is given of each of them, with the addresses of their owners or agents. A ringing introduction in the characteristic vein of Mr. Watson precedes the list, and it is followed by eight pages of distinct facts about the State which every intending settler should know. There has also been reprinted for the use of his department from the *Columbia State* the address by Mr. Watson a couple of weeks ago at Union on vital phases of the immigration problem.

BALTIMORE FACTS.

When there shall appear a publication presenting in compact form all the facts about Baltimore that would be investors and new citizens might desire, large drafts must be made upon the Municipal Hand-Book, issued by City Librarian Wilbur F. Coyle. It is almost of vest-pocket size, but it contains in condensed form complete details of the personnel of the municipal government, its courts, commissions and boards, an exposition of municipal revenues and expenditures, information about the funded debt, the taxable basis, tax rates and licenses, statistics of the population and statements of municipal improvements under way. There is, in addition, a mass of valuable information in condensed form about the history of the city. The Hand-Book reveals results of painstaking and intelligent zeal in collecting material from widely separated and in quite a number of instances obscure sources, and in presenting them in a style that will appeal to the practical business man.

ACTIVE IMMIGRATION AGENTS.

Mr. Reginald Dykers of the immigration department of Louisiana, has adopted the policy of enlisting in immigration work settlers who have had experience in the State. He has obtained from them a large number of letters in their native tongues describing conditions and opportunities in Louisiana, and these are being circulated among their fellow-countrymen at home in Europe.

PICKING UP.

Mr. James A. Harley of Sparta, Ga., writes to the *MANUFACTURERS' RECORD*:

"All indications point to a steady and continued improvement in almost all lines of business, and in my retail estate and timber business the interest has increased in a marked manner in the last 10 days."

A Young North Carolina Town.

[Special Cor. Manufacturers' Record.]
Zebulon, N. C., July 25.

Zebulon is the youngest town on the Norfolk & Southern Railroad. It lies midway, at a distance of 25 miles, between Raleigh and Wilson, in Wake county. It is in one of the finest farming sections of the State. It is but a year and a half old. Last season more than 1,000,000 pounds of tobacco and 2000 bales of cotton were marketed here, and it is expected that 2,500,000 pounds of tobacco and an increased quantity of cotton will be sold this season. Zebulon's population is about 1000. It has 20 stores and more than 125 residences. The Zebulon Hosiery Mills are operated by a company with Messrs. T. J. Horton, president and manager; W. H. Edwards, vice-president; W. H. Edwards, Jr., secretary, and J. D. Horton, treasurer. Mr. T. J. Horton is Mayor of the town. There are two tobacco warehouses, operated by Beasley & Twiggs and Jones, Robertson & Schemblee, respectively. The Bank of Zebulon was organized about a year ago with a capital of \$10,000. The Zebulon Cotton Oil Co., with a capital of \$50,000, has just been organized to build a one-press mill which will handle 20 tons of seed a day.

A. M.

How Railroads May Meet Transportation Needs.

[Written for the Manufacturers' Record.]

A dispatch referring to the most recent serious railroad accident states that it is believed that a rotten tie caused the accident, and adds: "There is evidence, it is alleged, that the tie was in such a worm-eaten condition that the spikes holding the rails were pulled out."

Every man who carefully investigates the railroad situation in this country knows that the majority of roads are deteriorating physically. In the struggle last year to keep up with increasing business it was practically impossible for the railroads, as a whole, to maintain thorough efficiency in track and rolling stock, and since the panic it has been impossible for them to secure the money with which to do this. Public hostility to railroads must necessarily react on the public and result in a deterioration of present facilities and an inability to add to mileage and equipment to such an extent as to bring about in the near future freight congestions, with their heavy losses to business interests, and, far worse than this, to many railroad accidents with frightful loss of life. Criticism of railroads at the present time will not help the situation. Great as the losses may be to railroads, the losses in property and life to the public will be still greater unless there is a radical change.

It looks as though the people generally are taking an erroneous position in regard to the discussion now under way as to whether or not the railroads should make a general advance in freight rates. Business men who feel that they have at any time, when the condition justifies it, a right to increase the price of their goods, the owners of mineral and timber properties who have seen them advance from a few dollars to many dollars an acre in value, regard these changes as natural and as the inevitable outcome of the growth and development of the country. But when the railroads, facing a situation which demands a radical change, undertake to advance freight rates they immediately arouse into active agitation the latent hostility against railroads which political agitators during recent years have been steadily fanning into life. The railroads have made many blunders. A great amount of inefficiency, if not of stupidity, has been displayed on the part of some managers, but, as a whole, the railroad people of the country have not been guilty of any more blunders than the average business concern nor have they been more unfair to the public than the public has sought to be unfair to them. Many men have believed that they were justified in shipping freight under a false classification in order to get a lower rate, or to avoid paying a railroad fare if, perchance, the conductor failed to see them. Men guilty of thievery of this kind are sometimes loud in their denunciation of the sins of the railroads. On the other hand, the majority of people are honest and would scorn to wrong a railroad of a five-cent fare or to secure a lower freight rate by cheating in classification of goods. Likewise there are many railroads that are just as honest as these good people. Recrimination on either side is a mistake and simply obscures the situation.

Any man who will honestly investigate the subject, and who is sufficiently familiar with the economic forces which are making for the development of our country, to be able to measure something of the future, will recognize that we have reached a point in the railroad situation almost as acute as that which faced the horse-car lines when 15 years ago it became necessary to change almost over

night every street railroad in the country to electric power. The old horse-car line had been profitable under the conditions then prevailing, but when electricity came to the front the horse car was doomed to immediate bankruptcy unless it met the new conditions. A change almost as radical is essential in the transportation interests of the whole country. Temporarily there are more freight cars than the amount of freight moving requires, but this is only a temporary condition and will soon pass away. One year ago it was estimated that there was a shortage in the actual needs of the railroads of about 100,000 cars to meet the then pressing demands for transportation. The number of locomotives was likewise far less than the demand, and track facilities and terminal facilities were equally as short of requirements. This physical condition made it impossible to handle freight promptly. In many cases goods needed for immediate use were months on the way between the seller and the buyer. Cotton mills in the Carolinas sometimes found cotton for which they had paid on bills of lading two or three months behind in delivery, and the railroads were helpless. It will not be long before we are back to the same condition.

Notwithstanding the present temporary inactivity in many lines of industry, the country is growing, rolling stock and track are wearing out, the consumption of general merchandise goes on in fairly large volume, the shelves of the retailers are becoming bare of stock, and soon we shall see abundant activity again. Then it will be found that the car shortage will be far greater than it was a year ago, that the condition of the tracks has been steadily deteriorating, and delivery of freight will be still slower, and railroad accidents, involving the death of many, will be even more numerous.

A fair study of the situation shows that it would require at least \$5,000,000,000 to put the railroad facilities of the country in shape to meet the growth of trade within the next five years. Mr. James J. Hill, president of the Great Northern, estimates the amount at from \$7,000,000,000 to \$8,000,000,000. But take the more conservative figure put out two years ago and long before Mr. Hill made any estimate, and it is safe to say that unless we are to see a practical breakdown of the transportation interests of the country, involving stupendous losses to the people from their inability to do business, as well as stupendous losses to the railroads—and the former will far exceed the latter—we must spend \$5,000,000,000 upon the expansion of the railroad facilities of our country within the next five years. We have not enough locomotive works nor car shops to provide the equipment that will be needed. It is questionable whether we have rail mills enough to make the rails that will be required. Certainly we have not enough to make the rails for an expansion such as we should have. Much of our railroad construction has been like pioneering work in all things, hurriedly done to meet present needs, and must now be done again in a more solid and substantial manner. The character of road-bed, of cars and locomotives on such lines as the Pennsylvania and New York Central must soon be the standard for all the leading railroads of the country. How far short of this condition they fall may be seen in a statement recently made by a commission appointed by the State of South Carolina. This commission, reviewing the railroad situation from a friendly standpoint, said that the physi-

cal condition of the roads in that State is not up to the standard fixed by the roads themselves 20 years ago.

That transportation is an essential factor in the prosperity of an individual business, as well as in the business life of a community, is admitted without question. Then, granting this, and also that the practical rebuilding of the railroad system of the country and the vast expansion of terminal facilities, of double track and of rolling stock are essential, where is the money to come from? It is certainly not in the treasury of the railroads. Most of them are struggling to keep alive, and are today, under present conditions, unable to maintain their physical condition.

Public agitation against railroads has made it almost impossible to secure capital in large amounts for new construction work, and the very men who are most active in this agitation against railroads would not for a moment think of investing their own money in railroad securities so long as this public hostility exists. Without this vast expenditure upon railroad expansion the farmer will be unable to market his products except at a great disadvantage and often after weeks and months of delay; the manufacturer will not be able to secure his raw material nor to deliver the goods which he makes. We might as well attempt with our bare hands to butt down the pyramids of Egypt as to undertake to find a solution of this problem other than in providing some way by which the railroads can show sufficiently large earnings to attract capital in order to enable them to provide the facilities essential to the prosperity of the farmer, the day laborer, the mechanic, the merchant and the manufacturer. The big capitalist can generally take care of himself. He may have heavy losses to bear, but in the long run he can afford to bide his time. The other classes are the ones whose ability to do business and to make a living absolutely depends upon general prosperity and on ample transportation facilities with which to do business.

A point raised against the proposed advance in freight rates is that this is done in order to avoid the necessity of cutting wages. If that be the situation, then the public ought to rejoice that railroad managers are striving to do just what the leading iron and steel makers of the country have for months sought to do, viz., to maintain a fair rate of wages. Low wages is not an indication of prosperity. If labor organizations would cease to put a premium on inefficiency by putting the inefficient, lazy workman on a par with the thrifty, industrious, efficient man, forcing the latter into the same groove as the former, destroying his initiative and his right to advance in proportion to his ability and willingness to work, the public would have little cause to complain against such labor organizations in their struggle to maintain high wages. The well-paid, well-housed, well-clothed and well-fed workman is infinitely more to be desired in this or any other country than the poorly-paid, poorly-fed and poorly-clothed workman. The one has a basis for the development of independence and self-reliance; the other, living on starvation wages, has but little opportunity for mental or material advancement. And since economic conditions, due in part to the flood of gold which is pouring out upon the world and part to other causes, are necessarily advancing the price of agricultural products, as well as the price of almost everything else which enters into human consumption, the laboring man has a right to demand a better rate of wages than prevailed 10 years ago.

The last five or six years have been the most prosperous the farmers of the whole

country have, as a class, ever known, and the value of the agricultural products of the country, by virtue of the increased price to a much greater extent than increased quantity, is more than double what it was a decade ago. The increasing cost of lumber, due to natural causes, necessarily enhances the price of dwellings and the rents that must be paid for them. We are on a plane of higher cost of living, due to these economic forces which are beyond man's control, unless it were within the power of Governments of the world to compel the closing of all gold mines and to do other things equally as absurd. The railroads have been struggling against these adverse conditions—adverse as to their profits. They have seen their track wearing out by reason of heavy locomotives and heavy cars much more rapidly than had been anticipated; they have seen their very growth, in their effort to handle business, limit the life of their physical properties, and now they find themselves confronting a condition where hundreds of millions must be expended as quickly as possible for new rails and new ties, new rolling stock and larger terminal facilities. They have no magic wand the waving of which will fill their empty treasuries with the capital needed to do this work. Finding that the cost of transportation, the cost of replacing their rapidly exhausting physical properties, is steadily increasing, they are seeking to find a way to meet these conditions. Hence the suggestion of an advance in freight rates. Unintentionally the railroads have been misleading the public and

misleading themselves by supposing for years that they were doing business at a profit, when they were not taking into account the full amount of depreciation in their rolling stock and track which has been going on. They have been giving the American public rates about one-half to one-third as high as the average freight rates in Europe, and not content with these rates, we have been clamoring for still lower figures. It is impossible for lower rates to be granted without utter ruin of the railroads. It is probably impossible to stand on present rates without seeing the railroad interests of the country bankrupted physically and financially, broadly speaking. And then bankruptcy, physical or financial, or both, would mean losses to the general public by the side of which an increase in freight rates would be infinitesimally small. The prosperity of the country demands that railroad business should be made so profitable that not only millions, but billions of money will be drawn into investment in railroad securities, and that very promptly if we would not see national progress halted. A man may have absolutely no interests in railroads themselves; in fact, he may be bitter in his antagonism to railroads, or to railroad managers, and still recognize the fact that they are the key which unlocks the door of prosperity, or the key which locks us into the dungeon of stagnation and poverty. Not for the railroads as railroads, but for the railroads as the transportation power upon which prosperity or poverty depend, should the public today view the situation.

rate of the railroad having the long haul. It can be readily understood that if cargo can be so congregated as to enable a ship to work all of its batches at one and the same time at a minimum cost the maximum facilities are being afforded.

Under date of July 15 the Daily Commercial and Trade Reports said:

"Many manufacturers who ship to foreign countries through New York forwarding concerns seem to be unaware of the 'free lighterage' privilege which export freight shipped in carload lots enjoys. As a consequence of not seeing that their railroad billing to New York reads 'lighterage free,' the *Exporters Review* states that many shippers have had to pay extra charges for cartage from the railroad to the steamship pier, which latter may be in Brooklyn or Hoboken, thus entailing extra ferriages also. The 'lighterage free' clause entitles the shipper to free delivery of carload lots alongside steamer or on steamer's dock at such piers as are usually employed by any of the ocean lines. On full carloads, made up of export shipments to go by different lines, one free delivery is allowed, extra deliveries being at the rates which became effective on March 15, 1908."

The Belt Commission feels that if this admitted condition applies in New York it should apply with equal force in the port of New Orleans. There is no reason, it contends, why every facility that is given in New York city could not be more economically applied by the transportation companies in this port. Its crescent shape, which is only partially covered by the trunk lines, is now entirely covered by Belt Line tracks.

Through the effort of the Levee Board, in acquiring river-front property for levee purposes, which has recently taken place and which has caused the demolition of hundreds of buildings along the river front, there has been made available space on the incline of the levee for Public Belt tracks that gives ample facilities for business now here and yet to come. From these large yards which the Belt Railroad proposes to construct will be constructed inclines at suitable points to serve the barge system. This being a public effort, and in entire line with the work being done by the Levee Board and the Port Commission, the first controlling the levees and the latter controlling the wharves, there are thus provided three public ownerships that as a unit entirely control the harbor front and make a condition unique in the harbors of the world.

The barge system as proposed by the Belt Railroad has been contingent on the construction of the Belt Line tracks. These tracks, now about 30 miles in extent, having been completed and about to be put in operation, the commission is now able to take up for final consummation this important adjunct, the barge service, which it expects to push to a speedy completion.

By an act of the recent Legislature the commission is authorized to bond its revenues to the extent of \$2,000,000. This act will become a constitutional amendment by a vote of the people at the November election, immediately after which it is proposed by the commission to obtain the necessary funds to complete this work, which when finished will obviously make this port the peer of all other ports in as far as facilities and cheapness of service are concerned.

As conditions are now steamships of the largest size have been frequently compelled to shift from berth to berth as many as 12 times to complete a cargo, all of which means excessive cost, undue delay and congestion in the port. When the Belt Line facilities are finished it is the uni-

NEW ORLEANS PUBLIC BELT RAILROAD.

[Special Correspondence Manufacturers' Record.]

New Orleans, La., July 25.

The Public Belt Railroad of New Orleans has announced that it will commence operation on the third day of August next. This railroad is owned by the city, and will be managed, controlled and operated by a commission appointed by the Mayor under an ordinance about four years in force. Since the organization of the commission they have been busy in procuring rights of way, constructing track and making the necessary arrangements for this important improvement. The effort has been long and strenuous, but the result shows a double main line track along the entire river front, with ample sidings, team tracks and depot facilities, and with sidings back of every public wharf. There is no other publicly-owned belt line terminal service in any seaport or city in the United States; therefore, this operation is looked upon with more than passing interest by the railroad and transportation world.

The plan of the commission is to handle all river-front business to all of the public wharves and to all of the large industries on the basis of free switching to the consignee from all competitive points from all railroads terminating here. This effort has met with the cordial co-operation of the railroads, and the absorption of switching charges has been agreed to and will be embodied in their tariffs.

The object of the commission is not only to facilitate the movement of cars and contents, but at the same time to cheapen the charges at this port. Their facilities will provide for the railroads that are now here, and, as far as handling cargo to and from ship side is concerned, will also take care of roads yet to come on the same basis.

New railroads will now have only to build to the parish line, and from that point cars will be handled by the Public Belt to all points reached by it, which includes every important freight center in

the city. Not only will time and money be saved through this public ownership effort, but it creates a competition among the trunk lines in the interest of prompt service to and from all competitive points throughout the entire South and Mississippi valley.

As the tracks of the Belt Line are laid out they will ultimately reach all of the large cotton compresses, 32 in number, as well as all of the large wholesale interests, the result of which will be to minimize handling charges, eliminate drayage cost and so reduce the frictional charges in this port as to make it the natural center for the congregation or aggregation of export raw material throughout the entire territory tributary to New Orleans. The great drawback with all seaports is the cost connected with handling, storage and shipment. When this can be reduced to a minimum the condition becomes unique and ideal.

Coupled with this effort is a barge system which the commission propose to introduce that will connect up their tracks with the trunk lines that terminate on the west bank of the river and at the same time enable them to serve ships at their wharves from the river side. They claim that with a system of barges that they propose to inaugurate they can double the wharf service of this port without any material increase of cost. These barges will contain 14 cars each, and the floor of the barges will be so arranged as to be level with the floor of the cars, and the beam will be as great as it is possible to make it, considering the slips for ferry inclines that they will connect with.

The aim of the commission is to make the barge service, in conjunction with the land service, so complete as to comprehensively cover the harbor conditions and enable them to reach steamers, whether on the east or west bank, or in midstream, at a cost so nominal as to be absorbed in the

versal belief of the shipping world that these obstacles will be entirely overcome, and that a steamer will moor but once and will stay at her berth until her cargo is completed, at a saving both in time and cost so great as to almost double the steamship shipping facilities in this port.

The natural advantages of New Orleans need developing, and this barge system, in connection with the Belt Railroad, seems destined to do more in accomplishing that purpose than all other efforts combined. The importance of the move can scarcely be calculated. The congestion that has so long retarded the prompt handling of cargo is about to be overcome, and it seems now but a matter of a few months when the fact will be demonstrated that this is the cheapest and most expeditious port in the country for handling all classes of cargo, whether they be in bulk or in carloads or less.

The aim of the commission is to comprehensively take care of the export lumber business, and through the means of their lighterage service they expect to break bulk but once, and that when the lumber is taken from the cars into the steamers. The same can be said of all other bulk cargo that is low-priced and which is largely affected by terminal charges. The development of this effort will be followed with great interest by everyone who has the growth of this great seaport at heart.

The commission feels that this is too great a city to be subjected to the danger of drifting into a stevedoring center; they feel that the great forwarding warehouses of the Mississippi valley and the South should be located here, and it is their aim to create such perfect facilities as to make this condition possible.

ALBERT PHENIS.

THE MARYLAND GOOD-ROADS MOVEMENT.

[Written for the Manufacturers' Record.]

The State of Maryland has taken a leading position in modern road building and within the next few years will have one of the most complete systems of public highways of any State in the country. Although the culmination of this movement was reached at the last session of the Maryland Legislature, when a bond issue of \$5,000,000 was authorized to be used in the construction of a main artery system of State roads, the State began 10 years ago under an act passed by the Legislature of 1898 to lay the foundation for subsequent legislation in a systematic study of its highways and the preparation of detailed plans for their ultimate improvement. This work was intrusted to the Maryland Geological Survey, which was already engaged in a comprehensive study of the State's natural resources, and was thus well equipped to broaden its sphere of usefulness. The survey is controlled by a commission consisting of Governor Austin L. Crothers, State Comptroller J. W. Hering, President Ira Remsen of the Johns Hopkins University and President R. W. Silvester of the Maryland Agricultural College. Prof. Wm. Bullock Clark of the Johns Hopkins University is superintendent and State geologist and Mr. Walter W. Crosby is chief engineer. A highway division was established to cope with the new problem and a trained highway engineer was early secured from the Massachusetts Highway Commission to aid the superintendent of the survey in carrying out the provisions of the act. During the six years following the passage of this law surveys were made and plans and specifications drawn at the request of the county authorities for the improvement of many of the highways of the State. A modern testing laboratory was installed for the purpose of securing accurate knowledge regarding the value of the various Maryland rocks for highway construction. At the same time tests were made of street paving and general structural materials for the cities and towns of the State. Advice was given to county and municipal authorities on road matters generally, with the result that a much more enlightened policy in road management was gradually adopted in many portions of the State. Four counties, with the advice of the survey, revised their road laws so as to provide for the appointment of county road engineers, and in nearly every instance specially-trained men were secured.

In 1904 the Maryland Legislature almost unanimously passed the State aid to highways act which had been drawn up with the advice of the survey by a

committee of prominent citizens interested in road improvement, of which Mr. S. M. Shoemaker was the secretary, and the resulting law is often popularly called by his name. The foundation for this legislation had been laid by the survey and the administration of the law was placed in its hands. Under the provision of this act \$200,000 is appropriated annually by the State to meet one-half the cost of construction of improved State highways built in accordance with the plans and specifications and under the supervision of the engineers of the Geological Survey. Up to the end of 1907 about 75 miles of modern road, for the most part of macadam construction, had been completed at an average cost of between \$6000 and \$7000 per mile, less than the first cost of similar roads in Massachusetts, New Jersey and New York, which are the present leaders in modern methods of road construction. Plans had also been prepared up to this time for many additional miles and contracts let in several instances. The methods followed are similar to those successfully pursued by most of the States now engaged in up-to-date road construction. In every instance where the local interests participate there are bound to exist some differences of opinion in the early stages of such a movement, but the methods of the trained highway engineer have been ultimately accepted everywhere as the only sound ones to follow.

Another important act was passed in 1906 appropriating \$90,000 and the use of the prisoners at the House of Correction in the construction of the Baltimore-Washington road, which has come to be known as State Road No. 1. Under this act the precedent was set for work done wholly at the expense of the State, and, like the State aid act, the administration of the act is under the Maryland Geological Survey. About one-third of the road had been completed at the end of 1907. The General Assembly of 1908 appropriated \$150,000 additional for the continuation of the work.

The passage by the General Assembly of 1908 of the act providing for a loan of \$5,000,000 for the construction of a main artery system of modern highway is by far the most significant step taken by the State. This work is under the control of a commission of six, of whom three are members of the Geological Survey, Gov. Austin L. Crothers, President Ira Remsen of the Johns Hopkins University, and Dr. Wm. Bullock Clark, the State Geologist, representing the survey. The other members are Mr. John M. Tucker, the chairman of the commission; Mr. S. M. Shoemaker and Mr. Francis C. Hutton.

The new commission has accepted as its engineering force the engineers of the Geological Survey. By this means the entire work of State highway construction is effectively carried on under a single engineering staff. The plan under this last act is to build a system of through connecting roads that shall serve as main arteries of travel. As far as possible they will converge in Baltimore, the metropolis of the State, which, under the present basis of taxation, will meet more than one-half the cost of the system. It is proposed under the terms of the act to devote nearly, if not quite, \$1,000,000 of the amount to the improvement of the city portions of the selected highways that enter Baltimore.

The commissioners have already held hearings at all of the county towns in order to obtain directly from the people in the several sections of the State their views regarding the most available routes. The final decision regarding the location of the roads rests with the commission, and it will be their aim to construct a system of highways that will be of benefit to the largest number of people in the State.

The commission expects to build from 700 to 800 miles of modern highways under the present loan, so that Maryland should have by the end of five years under the several acts a system of from 1000 to 1200 miles of roads equal to that in any other portion of the country.

Two Notable Additions to Atlanta's Buildings.

[Special Correspondence Manufacturers' Record.]

Atlanta, Ga., July 27.

Two fine new buildings, the Masonic Temple and the Auditorium-Armory, representing a total expenditure of practically \$750,000, will be finished in this city

which will give Atlanta adequate capacities for handling the scores of conventions that have annually visited this city. Although numbers of conventions have been here in the past, Atlanta as a convention



NEW MASONIC TEMPLE AT ATLANTA.

by the end of the year, adding to Atlanta's array of handsome edifices. Located in the center of the city, the two buildings will lend beauty to the business district by the imposing type of architecture and the originality of the designs.

While the construction of the buildings

city has been seriously handicapped by the fact that there were no buildings sufficiently large to accommodate the crowds. With the new Auditorium-Armory this fact can be overcome, as the building will have a seating capacity of 15,000 people, with all of the arrangements and conven-



AUDITORIUM-ARMORY BUILDING AT ATLANTA.

has placed in circulation approximately \$750,000, the value of the buildings means more to Atlanta than the financial cost, as the buildings are of a class that Atlanta has needed for many years. Especially is this true of the new Auditorium-Armory,

ences of the most modern convention hall in the United States. In addition to the convention facilities, a home for Atlanta regiment of State militia will be provided. The new Masonic Temple, which has been vitally needed by the different local Ma-

sonic bodies, will furnish a home for nearly 30 organizations. The temple has been built by subscriptions.

The Auditorium-Armory, which will be completed about December 1, according to the present plans, will be one of the most beautiful buildings in Atlanta, as well as one of the most spacious convention halls in the entire country. It will be within three blocks of the heart of the business district, on the corner of the new Washington-street viaducts and Gilmer street, opposite the boys' high-school building. Some idea of the magnitude of the building can be learned when it is known that the lot fronts 200 feet on Washington street, running back on Gilmer street. The lot cost approximately \$90,000. The building will be of solid red-finished brick, with stone trimmings. The Auditorium-Armory will to all appearances be one mammoth building covering a space of 180x289 feet, with an open court all around, but it will be divided into two parts, one of which will be used for convention purposes, while the other will be a huge armory for militia companies in Atlanta, with spacious quarters for drillrooms, reception-rooms, lockers and banquet halls. A solid brick wall will divide the buildings, but the division will be so arranged that it cannot be seen except on the architects' plans.

The Auditorium proper will have a frontage of 180 feet, running back to the wall dividing it from the Armory. The Armory will cover a tract 79x180 feet. The Auditorium will be one story high, with the arena or seating capacity open to the top of the dome above. The Armory in the rear will consist of four floors. Beneath the seating floor of the convention will be a large basement that will be used partly for the machinery necessary for heating and lighting the building, and partly as a drillroom in connection with the Armory.

In that portion of the building which will be used by the militia companies will be a small convention room, or "small auditorium," which will accommodate the smaller conventions that would be lost in the auditorium proper. This hall will be 75x78 feet. The Auditorium will open on the street level, just off the Washington-street viaduct. Aisles will lead from the street into a large vestibule. Other aisles will immediately lead into the Auditorium, with its mammoth seating capacity. In the center of the Auditorium will be a large arena, oval in shape, 95x150 feet long. Promenades will be arranged around the arena, which will be used for the stage, concerts, horse shows, flower shows, etc.

The banks of seats rise on all sides opposite the arena, with the boxes at the foot of the tiers. Above the seats will be the galleries and the mezzanine floors, which will give the interior of the building the appearance of an amphitheater. Galleries will rise on the sides of the building. There will be no columns on the Auditorium floor, but the dome will be supported by roof trusses. The galleries will be held in place by rods let down from the roof. The interior architecture of the Auditorium will be plain and simple. In connection with the Auditorium will be a kitchen that can be conveniently used for the big banquets that will be given annually by the different civic organizations or attendant upon conventions.

The Armory, which will have entrances on Gilmer street, will contain nearly 12,000 square feet. The "small auditorium," reception-rooms, toilet-rooms and commissioned officers' quarters will be located on the first floor. Above the first floor will be other officers' quarters, locker-rooms and small gymnasiums. Accommodations will be furnished for 10 companies of infantry. The basement of the building will

be used as quarters for cavalry and artillery companies.

The plans for the building were drawn by Morgan & Dillon, the well-known local architects, while Gude & Walker have had charge of the entire construction of the buildings. Scores of bids were received by the building committee, but the Atlanta firms were awarded the contracts, and the construction at every stage has shown the wisdom of the choice.

The Masonic Temple, which will be completed December 15, will be in the most beautiful of Atlanta's business section. Situated at the corner of Peachtree and Cain streets, the temple will be the last public building on Peachtree street before the residential section of the street begins. Grouped about the temple is the new First Baptist Church, the Governor's mansion, the Elks new clubhouse and the Aragon and Majestic hotels. The new temple will have a corner frontage of 60 feet on Peachtree street, running back 140 feet on Cain street. The temple will cover all the ground with exception of 40 feet in the rear. The lot for the temple cost approximately \$80,000. The temple will cost in the neighborhood of \$215,000 when all of the furnishings have been completed. The building will be seven stories, with two mezzanine floors in the interior, and a basement. The exterior of the building will be of Georgia marble, limestone, terracotta and gray brick. Supporting the exterior of the building are four columns of limestone, 34 feet high and 3 feet in diameter. The columns rest on the cornice of the second mezzanine story, and are three floors in height. With the exception of two storerooms on the first floor on Peachtree street, the entire building will be used for the Masonic lodges. The rooms will be utilized for stores only for a short while, and will afterward be arranged for the use of the bodies of the fraternity. The temple will be equipped throughout with freight and passenger elevators. In the basement of the building will be located the banquet hall, the kitchen, tyler's rooms and other quarters. The first floor will be used as a vestibule and the two storerooms. Each floor will be finished in a different woodwork. Marble floors and wainscoting have been laid on the different floors, and the woodwork will be in oak, mahogany and yellow pine.

Work on the interior of the building has been begun, and will be pushed as rapidly as possible. The contract for the interior has been let to the Robert Mitchell Furniture Co. of Cincinnati for \$28,000. All of the rooms will be finished in mahogany except the room in Gothic, which will be finished in oak.

The North Georgia Marble Co. has been awarded the contract for the corridor work, which will cost \$5000. The plastering of the building has about been finished at a cost of \$15,000 by the Southern States Plastering Co. of Chicago. Bids for the furnishing of the building are now being considered by the building committee, and will be accepted in a short time.

The second floor of the temple will be used by the symbolic or blue lodges. The third floor will be the quarters for the commanderies of the York rite and the Shrine. On the fourth floor will be located the lodgerooms of the various Scottish Rite bodies.

The interior of the temple will be symbolic of the different Masonic bodies. Lodgerooms on the second floor will be finished in the Doric and Corinthian styles of architecture. The chapter-room and the Gothic hall, in the commandery quarters on the third floor, will be finished in an Oriental manner. The Scottish Rite rooms on the fourth floor will be finished in the Egyptian.

A massive stained-glass window will be located in the commandery-room on the third floor. The window will be ingrained with the Masonic symbols, and will be 30x40 feet. A history of the order from its origin to the present time will be portrayed in the top part of the window.

Divided into two parts, the right side of the window will show the battle of Acre, while the left-hand side will illustrate the court of King Darius of Persia.

The plans for this building were also drawn by Morgan & Dillon, and the construction was in charge of Gude & Walker.

Reducing Expenses in a Concrete Warehouse.

[Special Correspondence Manufacturers' Record.]

Nashville, Tenn., July 25.

Having proved the great value of a centrally-located fireproof warehouse, on the tracks of the railroad terminal yards, in reducing the expenses of wholesale merchants for insurance, drayage and handling, and also in saving time, labor and patience, the Merchants' Wholesale Warehouse Co. of this city has made arrangements to secure the capital for the extension of the present warehouse building.

To the present building, 500x130 feet, four stories, basement and sub-basement, which is said to be the largest monolithic concrete warehouse ever constructed under one roof, it is proposed to add an extension of 380 feet 6 inches of the same type of building, the same in size, appearance and construction as the existing warehouse. The owners hold themselves in readiness to begin work on the addition just as soon as a sufficient number of prospective tenants sign lease contracts to insure a reasonable return on the investment.

In the preliminary drawings the new building is divided into 14 25-foot units and one 30½-foot unit. By securing leaseholders in advance of construction the builders will be able to partition the units into compartments of the size desired by the respective tenants. The placement of elevators, stairways, offices, etc., may also in this way be arranged to conform to the peculiar needs of tenants.

The 500-foot front of the present building is divided into 12 compartments, all fully occupied, and no difficulty is anticipated in filling the extension as soon as its proposed construction becomes known to the merchants of the city.

In common with the existing warehouse, the new building will possess the advantage of fireproof construction and fire protection, by means of a sprinkler system, besides the lowest rates of insurance, heat, light and power. The construction is rat-proof, and there is further to be considered the elimination of drayage and of delay of in or outbound shipments in carload and less than carload lots. Bills of lading are issued by the railroads in the warehouse, which is known as Cummins Station. The complete building, as projected, will contain 7,000,000 cubic feet, will cover two acres of ground and will have 10 acres of floor space. Access to 44 cars on two tracks at the rear of the building will be given to all tenants.

This immense concrete warehouse, in its present and prospective scope, is the result of a scheme of co-operation among a number of the most prominent merchants of the city. They previously had conducted their business in various individual warehouses in the business section of the city and some distance from the railroads. To better their condition the idea was conceived of forming the Merchants' Wholesale Warehouse Co., to erect a fireproof building alongside the tracks, and thus save the large expense of hauling, and at the same time obtain greatly reduced insurance rates.

The saving in insurance and drayage alone to the present tenants is said to amount to over \$200,000 per year, or more than 50 per cent. of the original investment. Insurance on the stock carried by the merchants in the old type of frame

buildings ranged from \$1.80 to \$2.20 per hundred. In the new fireproof reinforced concrete structure the rates were reduced to 40 cents per hundred and drayage eliminated altogether.

The building provides enough floor space not only for storage, but also for carrying on the wholesale shipments. The dividing walls are of concrete blocks, and entirely cut off each warehouse from the others. Each warehouse is complete in itself, with elevators, stairs, etc., and as the building is located not only on the railroads, but in the central part of the city as well, it is the sole place of business in the city for each firm.

Two railroad tracks parallel the basement, and the unloading platform is provided for by an extension of the basement floor. From this platform a wide trucking platform reaches all elevators.

The interior columns of the building are spaced 12 feet apart one way and 16 feet 7½ inches the other. The partitions are not spaced uniformly, but at different distances apart, so as to afford the prospective tenant a choice of several sizes of rooms, each of which extends the full depth of the building.

The roof is of concrete slab, three inches thick, laid on a slope of one-quarter inch per foot, and is covered with tar and gravel roofing.

Although the floor loads are heavy, the columns are only 19 inches square in the basement, and less than this in the stories above, as the spacing is close. The columns are designed for a loading of 750 pounds per square inch. This is said to be a high stress for the proportion of cement to the aggregate used (1:2¼:4½), but as no account was taken of the area of concrete outside the steel loops, nor of the strength of the vertical steel, the loading is said to be really conservative.

The outside face of the building is veneered with brick, so as to give a uniform appearance. The exterior trimmings and the door and window sills are all artificial stone.

The warehouse was about eight months in building, and 11,830 cubic yards of concrete were placed. Of that amount, 8398 cubic yards were reinforced and 3432 cubic yards plain, including the blocks for division walls. The mortar finish for the floors measured 510 additional cubic yards. The total amount of cement used was 17,975 barrels, divided as follows: Reinforced concrete, 10,365 barrels; floor finish, 1690 barrels; artificial stone, 99 barrels; plain concrete, 1770 barrels; concrete blocks, 4057 barrels.

The cost of the original building was \$357,000, including finish, of which \$192,000 was for the reinforced concrete and excavations, the latter being exceptionally heavy, as the building stands on ledge. A crushing plant was installed, however, and the broken stone and screenings used in the building. The cost of the lumber for the forms was \$5400, and it was used from four to eight times, yielding in the end a salvage of 20 per cent. The cost of the construction plant was \$19,000.

The construction gang consisted of three foremen, 3 men mixing, 32 men placing, 45 carpenters, 20 steel men, 9 engineers and 60 to 150 men on excavation and 10 to 40 men on stone crushing.

McDonald & Dodd drew the plans for the warehouse, and Hunter McDonald, who is general manager of the warehouse company, was the supervising architect. W. H. Burn was the engineer, and the Oliver Company builder.

The erection of the warehouse has proved an unquestioned boon, as well as a source of great profit to Nashville's wholesale interests, besides enabling the merchants engaged in this line of business to enlarge their operations and the volume of their business. They not only reach territory which was too remote to be reached under former conditions, owing to heavier operating expenses, but they compete more vigorously and are able to make larger sales on price competition in territory where their business was once limited.

Seventy-five per cent. of Nashville's wholesale grocery business is said to be conducted in Cummins Station at the present time. Besides the element of convenience and compactness given to the wholesale trade by the use of this warehouse, as compared to the combustible rattletraps generally occupied by wholesale merchants, Nashville has seen this business take

and there was some on the basis of \$12 for the third quarter. There were a few on the basis of \$12.25, and a few also on a \$12.50 basis.

The orders that went at \$12.50 were of only moderate amounts and usually for fourth quarter. A small lot of No. 3 foundry went at \$11.50, and a small lot of gray forge was sold at \$10.75. Two of the leading interests are practically out of the market, as their minimum price is now \$12.50 for the nearest delivery. The indications at the close of the market pointed towards more activity this week. The attention of the sellers is directed to the fact that orders for round lots are limited, while those for small lots seem to be the vogue. It compels the conclusion that buyers are taking only what their necessities are forcing them to take. If the sellers would accept what the buyers say is the market, furnace yards would be bare in a day or so. As it is, from some sellers it is hard to draw any iron, as they are on Easy street as to sales, and will have all they can do to make satisfactory deliveries the balance of the year.

The market for scrap iron has been sick

thing that is discouraging to the pipe interests is the conditions surrounding the strike situation.

The strike situation is about the same, both parties claiming the advantage so far of gain to their respective sides. On last Friday the operators held a meeting at the Hotel Hillman for the purpose of effecting a thorough organization. The attendance was not limited to the operators of the Birmingham district, but was in the interest of all those who were in favor of the open-shop plan. The meeting was well attended and the members were knit together by a common interest and were in perfect accord. There is great determination on the part of the operators to conduct their business without dictation from any source, and they are putting forth strenuous efforts to carry their point. It was estimated that about 90 per cent. of the production of coal in the State was represented at the meeting. The association will be known as the Alabama Operators' Association.

Papers of incorporation were filed for account of the American Laundry Co. The capital stock is \$10,000 and its place

of 1907. The production of pig-iron in the first half of 1908 was a little over 51.3 per cent. of the production in the first half of 1907, during which latter period the iron trade was not affected by panic conditions. The following table gives the half-yearly production since 1905:

Gross tons.	1905.	1906.	1907.	1908.
1st half...	11,163,175	12,582,250	13,478,044	6,918,004
2d half...	11,829,205	12,724,941	12,303,317

Total... 22,992,380 25,307,191 25,781,361

The decrease in production in the first half of 1908 as compared with the second half of 1907 amounted to 5,385,313 tons, and as compared with the first half of 1907 to 6,560,040 tons. The production in the first half of 1908 was the smallest in any half year since the last half of 1900, when 6,146,673 tons were made.

The following table gives the production of pig-iron in the United States in half-yearly periods from 1900 to 1907 in gross tons:

Years.	1st half.	2d half.	Total.	Inc. or dec.
1900...	7,642,569	6,146,673	13,789,242	D. 1,496,896
1901...	7,674,613	8,203,741	15,878,354	I. 629,128
1902...	8,808,574	9,012,733	17,821,307	I. 304,159
1903...	9,707,367	8,301,885	18,009,252	D. 1,406,482
1904...	8,173,438	8,333,595	16,507,033	I. 150,157
1905...	11,163,175	11,829,205	22,992,380	I. 646,030
1906...	12,582,250	12,724,941	25,307,191	I. 142,691
1907...	13,478,044	12,303,317	25,781,361	D. 1,174,727



IMMENSE CONCRETE WAREHOUSE AT NASHVILLE TO BE ENLARGED.

higher rank in character, scale and scope than it ever previously possessed.

HAYNES McFADDEN.

MORE FREQUENT SALES.

Variation in the Iron Market at Birmingham.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., July 27.

The greater part of the past week the iron market was rather quiet. But toward the close of the week it took on some new life and sales were more frequent. One of the leading interests sold two round lots, aggregating 10,000 tons. The price was suppressed, and has given rise to a good deal of guessing. Most of these guesses were below \$12, though there were a few at that price. Toward the close of the week there were several inquiries for lots of 5000 tons for delivery during the third and fourth quarters. But they had the earmarks of feelers, and excited very little interest.

One shipment that excited some interest was 20 cars sent to the Government at Panama and concluded the shipment of sale made a short while back by the Alabama Consolidated Coal & Iron Co. to the Panama zone. There was one sale of 500 tons each for the fourth quarter this year and the first quarter of 1909 on the basis of \$12 for No. 2 foundry. There were a few sales on a basis of \$11.50 for No. 2 foundry and some on the basis of \$11.75,

the past week, and there has been nothing of an encouraging nature communicated concerning it. But it is no worse than it was the preceding week. Quotations as furnished by Weller & Co. are as follows:

Old iron axles, \$14.
Old iron rails, \$13.
Old steel axles, \$13.50.
Old car wheels, \$12.
No. 1 railroad wrought, \$12.
No. 2 railroad wrought, \$10.
No. 1 country wrought, \$10.
No. 2 country wrought, \$9.
No. 1 malleable, \$10.
Machinery castings, \$10 to \$10.50.
Wrought-iron pipes and flues, \$10.
No. 1 steel, \$10.
Stove plate, \$8.50.
Cast Borings, \$5.50.

Cast-iron pipe continues to hold its own, with prices very firm, especially for those sizes that are not plentiful in stock. There is probably some cutting in values where undesirable sizes have more or less accumulated. But that occurs only occasionally, and full prices are exacted where the sizes desired are not ready for delivery. Prices for 4-inch and 6-inch pipe are given at \$22 to \$22.50, and for 8-inch, 10-inch and 12-inch \$20 is the price. In fact, \$20 seems to be the minimum price for the sizes above the small ones. There are several lettings that will be placed on the market in the near future which, it is anticipated, will bring full values. The only

of business is Birmingham. The stock consists of 200 shares, divided into shares of \$50 each. Marx Stern is president, B. L. Wertheimer is secretary and treasurer.

A certificate of incorporation has been filed for account of the Alabama Paper Box Manufacturing Co. The authorized capital stock is \$10,000, one-half of which has been paid in. C. C. Rhodes is president and John D. Elliot is treasurer.

Talk about the new million-dollar hotel to be built on the corner of Fifth avenue and 21st street is being revived, and plans are now in process of completion and will be ready for inspection this week.

A permit has been granted to the Birmingham Realty Co. to build a three-story brick warehouse on 28th street, between Second and Third avenues, to cost \$15,000. J. M. K.

SIX MONTHS IN PIG-IRON.

Significant Figures of Production in 1908.

The American Iron and Steel Association has received from the manufacturers complete statistics of the production of pig-iron in the United States in the first half of 1908, and publishes them in its *Bulletin* as follows:

The production of pig-iron in the first half of 1908 was 6,918,004 gross tons, against 12,303,317 tons in the last half of 1907 and 13,478,044 tons in the first half

The whole number of furnaces in blast on June 30, 1908, was 168, against 167 on December 31, 1907, and 359 on June 30, 1907. The number of furnaces idle on June 30, 1908, was 283, against 276 on December 31, 1907, and 83 on June 30, 1907.

During the first six months of 1908 the number of furnaces actually in blast during a part or the whole of the period was 250, as compared with 388 during the last half of 1907 and 382 during the first half of that year.

On June 30, 1908, there were 24 furnaces in course of construction, of which 23 will use mineral fuel and 1 will use charcoal, as follows: New York, 2; Pennsylvania, 6; Ohio, 6; Indiana, 8; Illinois, 1, and Michigan, 1.

On June 30, 1908, there were 17 furnaces being rebuilt, all mineral fuel, as follows: New Jersey, 1; Pennsylvania, 11; Alabama, 1; Ohio, 2, and Illinois, 2.

To Establish Brass Foundry.

It is proposed to establish a brass foundry at Rome, Ga., and a capitalist has offered to invest \$15,000 provided a practical manager will take charge of the enterprise and invest a few thousand dollars. For information address Wilson M. Hardy, secretary of the Manufacturers and Merchants' Association.

CURRENT EVENTS AS VIEWED BY OTHERS

SUGAR IN 1907.

[Daily Consular Reports.]

During 1907 fluctuations in prices kept within moderate limits. In the spring prices rose a little under the influence of the scarcity of raw sugar on the principal European markets, where it serves as a basis of transactions for future deliveries. This scarcity was caused by the heavy shipments made to the United States in October-December, 1906, and later by large purchases made by German refiners, in view of an eventual compromise concerning which the negotiations proved fruitless.

The sowing of beet-root seed was about the same as that of the preceding year, which was fortunate, as the crop of the season 1906-1907 had been very large. In 1907, however, the weather conditions for the development of the beets were very unfavorable during the entire summer. At the beginning of September the crop seemed to be backward, and both an agricultural and industrial deficit was expected. Under this apprehension the prices quoted on September 6 were the highest reached during the year, viz., \$4.95 and \$4.78 for October-December.

Later came a period of fine weather, during which the beet root made great progress, which resulted in the crops being scarcely less abundant than those of 1905 and 1906. Prices fell rapidly, as the results of the harvest and of the manufacture created the impression that the deficit of the production in Europe would only reach from 100,000 to 150,000 tons. The world's production was as follows:

	1907-8.	1906-7.	1905-6.
European beet sugar: Tons.			
Germany.....	2,132,000	2,239,000	2,418,000
Austria-Hungary..	1,440,000	1,344,000	1,510,000
France.....	725,000	756,000	1,090,000
Belgium.....	235,000	283,000	329,000
Netherlands.....	175,000	181,000	207,000
Russia.....	1,410,000	1,440,000	968,000
Other countries..	435,000	467,000	410,000
Total for Europe..	6,552,000	6,710,000	6,932,000
U. S. beet sugar....	410,000	433,000	284,000
Cane sugar.....	7,203,000	7,361,000	6,742,000
Total.....	14,165,000	14,504,000	13,958,000

The deficit of the universal production is thus figured at 340,000 tons. However, it must be borne in mind that in the 7,203,000 tons given as the production of sugar-cane (figures given by Willet & Gray), the Cuban crop is estimated at 1,200,000 tons, as against 1,428,000 tons in 1906-1907. (The last Cuban crop amounted to about 900,000 tons.) But, by reason of the drought which prevailed in Cuba during the first months of the year, and which was very injurious to the cane, the deficit seems to have been much higher than estimated by the statisticians, and, according to private opinions, it should be estimated at from 400,000 to 500,000 tons.

RELATION OF PROFITS.

[New York Times.]

The plain fact is that the situation demands railway facilities which cannot be supplied with the railways' present resources. It is true that the railways have done a larger business than at present, but it is equally true that at some future time, uncertain only in its precise date, the railway facilities will be as inadequate as they were a few months ago. Now is the time to prepare for that emergency, just as Mr. Carnegie always utilized reactions in the steel trade to enlarge his capacity. This the railways should now do, and they cannot do it by reducing wages. The increase of rates is demanded not less in the interest of shippers and Americans in general than of the railways themselves. It is a misconception of the situation to

represent that the railways are seeking to make rates excessive in order that railways and their employees may prey upon their victims—the public.

This best appears by a comparison of the course of prices for transportation and for commodities. The Treasury figures are as follows:

Railways' Average Receipts.	Per ton.	Per mile.	All commodities, wholesale prices. Per cent. of increase in 1907 over each preceding year.
1900.....	.75	.75	17.2
1901.....	.76	.76	19.4
1902.....	.76	.76	14.7
1903.....	.78	.78	14.9
1904.....	.78	.78	14.6
1905.....	.77	.77	11.7
1906.....	.77	.77	5.7
1907.....	.93	.93	14.7

It thus appears that during recent years the fluctuation of railway receipts has been inconsiderable, although, comparing the latest available figures, there is a decrease since 1890 from .93 cent to .75 cent. Can the opponents of the advance of rates name any other business which is done upon such a narrow rate of profit, and which therefore is so ill able to stand a decrease? A reduction of 1 mill per ton per mile would wipe out every dividend and destroy all railway credit. There is no other business which makes so low a rate of profit as railway dividends. If the rates should be reduced enough to wipe out all dividends President Stickney has calculated that the total saving to shippers would be one-half cent per hundred-weight on a 100-mile haul. On the other hand, an equal addition would not go to dividend account, but to disbursements for supplies and wages, and increase of facilities.

Examine the profits of the interests which allege that they cannot stand the trifling increase of rates under consideration. Their prices have not stood almost steady for a series of years, while they have been selling an increased volume at the price. On the contrary, each year has witnessed a handsome rise of prices. We are not urging that their profits are excessive, and should be reduced by law. We are not proposing that a public commission shall regulate their wages and value their undertakings with a view to reducing their prices. We are saying no more than that the relation of prices is unfair to railways, and that they who seek equity should do equity—that is, should give railways a square deal and a chance to live and grow, to the benefit of all.

PAPER FROM PINE.

[Hattiesburg Dispatch to Birmingham Age-Herald.]

The manufacture of paper out of the fiber of the yellow pine is the latest experiment to be entered upon in a practical way, and the prospects are that if this experiment shall prove successful a large factory for the making of pulp and finished paper will be established in Hattiesburg alongside the big lignum products factory which is designed to convert the juice of the yellow pine into alcohol.

W. H. Crocker, a Pennsylvania capitalist and manufacturer, after spending a week in this city as the guest of the J. J. Newman Lumber Co., on Monday shipped back east a carload of yellow-pine refuse, which is to be made the basis of the first test. While no contracts have been entered into, there is a complete understanding between Mr. Crocker and the Newman company by the terms of which all the refuse from the Newman mills will go to Mr. Crocker's prospective paper mill to be established in this city.

"Some of the chemists declare we cannot manufacture paper out of yellow-pine timber," said Mr. Crocker. "I may be a crank on the subject, but I feel reasonably certain that the experts are wrong. My special business here has been to make a thorough investigation of the yellow-pine fiber and of the sources of supply here. Now I am shipping a carload of yellow pine to the East, where our experimental tests will be made. I believe it will be a success. If I am found to be correct it will mean a cheaper paper than has been manufactured by any other process, as the material is here in unlimited quantities and can be had almost for the asking. Our plant in Hattiesburg for the manufacture of paper will be a large one, and we expect when we get the business on its feet to consume all the waste material of all the mills in this territory."

Many of the lumbermen of this section who are somewhat familiar with the processes for converting spruce and other woods into paper have long held to the belief that yellow pine could be treated in much the same way, and with like successful results. The experiments will be watched with great interest, not only in the yellow-pine belt, but throughout the country, where the advancing price of paper of all qualities has become an economic consideration of the first importance.

OKLAHOMA BUILDING.

[Daily Oklahoman.]

Newspapers throughout the country are taking up the slogan, "Now Is the Time to Build," which was first raised by the *American Lumberman* of Chicago some weeks since, that trade journal calling attention to the lowering prices in various lines of building materials.

Oklahoma City needed no advice of that kind, for this city has been "building now" all of the time for the last six years, and it has become a set habit.

At the present time, somewhere called "dull season," Oklahoma City is enjoying a veritable building boom, the character of structures ranging from eight-story skyscrapers to the small residence bungalow. Buildings now being erected and those contemplated for construction in the immediate future in Oklahoma City aggregate a valuation in excess of \$1,000,000.

In the matter of progress and prosperity Oklahoma City will be found right in the van at all times.

RECLAIMED LANDS ATTRACT.

[New Orleans Times-Democrat.]

That the reclaimed lands of Louisiana are more and more attracting the attention of homeseekers and investors from other States is apparent from the number of men from Northern States who have been investigating conditions here within the past few weeks.

One of this number is V. A. Lamson of Fairfield, Iowa, who is here to acquaint himself with the opportunities offered in Louisiana lands.

When seen yesterday at the St. Charles Hotel Mr. Lamson was preparing to leave for a trip through certain of the districts to study the system of draining the swamp lands. He is here not only in his own interest, but also in that of other men of Iowa, who expect to make investments in case Mr. Lamson makes a favorable report on conditions.

In regard to the future of these swamp lands Mr. Lamson expressed himself as being favorably impressed.

"While I have not had time to make sufficient study of the situation," he continued, "to pass judgment on conditions, still from what I have seen I would say that these lands offer good opportunities if their reclaiming is not too difficult. I was in Wyoming shortly before coming here, in the districts where lack of water is the only drawback to a rich country. If they only had there the surplus water of your lowlands they would have immensely productive land. But that is by the way. I am simply here now to look over the country and to make some study of conditions. I am not representing any syndicate, though I am making the trip in the interest of some other men as well as myself. As for purchasing land, that depends on the conditions that I discover."

Mr. Lamson expects to spend several days in the country districts. Most of the time he will be in Lafourche parish, where a large amount of land has been reclaimed.

FOR HOUSTON'S NEEDS.

[Houston (Texas) Post.]

As urgent as the need of water-main extensions is, it is well enough for citizens to understand that an expense in this direction will not necessarily involve an increase of taxation. The water system pays its own way, and water-main extension will largely increase the income of the department and pay all the expenses. The water system belongs to all the people of Houston, and certainly all the people of Houston are entitled to share its benefits, though at present there are thousands who have neither water for fire protection nor for domestic purposes.

The need for sanitary sewerage is vital, involving as it does the health and comfort of the people, and this is equally true of storm sewerage. Houston can never be the city it ought to be until all the people enjoy the advantages of water, sewerage and drainage; these necessities cannot be had except at great expense, and the money cannot be obtained except through bond issues.

Manifestly, water and sewerage systems cannot be perfected out of the proceeds of a single bond issue, but a start must be made some time, and it cannot be made too soon. There is no reason why such vital necessities should be indefinitely postponed. We cannot wait until the city becomes great, for the strongest argument in favor of making a beginning is that these improvements will greatly accelerate the growth of the city while benefiting the people who already reside here.

The administration is ready to co-operate with the citizens, and the citizens should get into line with the improvement club and co-operate with the administration.

To accomplish the best results some general plan should be adopted, and the energies and resources of the city should be devoted to the execution of the great plan rather than dissipated in making isolated improvements.

If the taxpayers will exhibit the proper public spirit and uphold the hands of the administration and the improvement clubs, within a few years we shall have a Houston of which we may all be proud, and the city will then be well on the way to that greater growth and development which its superior natural advantages warrant.

If you wish to keep posted on the progress of the South, read the
MANUFACTURERS' RECORD.
Price \$4 a year.

MINING

Coal in Oklahoma.

The total production of coal in Oklahoma in 1907 was 3,642,658 short tons, having a spot value of \$7,433,914, according to the Geological Survey's annual report on mineral resources of the United States for 1907. Since the survey's report for 1906 was published the area included within the Territory of Oklahoma and the Indian Territory has been organized and admitted into the Union as the State of Oklahoma. As, however, the entire coal-producing district is included in what was Indian Territory, the production of the State of Oklahoma is co-ordinate with the production of Indian Territory.

The new State began its history of coal production with a noteworthy increase over that of Indian Territory in 1906, when the output amounted to 2,860,200 short tons, valued at \$5,482,366. Compared with this the production of 1907 showed an increase of 782,458 tons, or 27.36 per cent., in quantity, and of \$1,951,548, or 35.6 per cent., in value. Only three States exceeded Oklahoma in percentage of increase in 1907 over 1906. These were Michigan, whose production increased 51 per cent.; Arkansas, which had an increase of 43.3 per cent., and New Mexico, with an increase of 33.8 per cent.

West Virginia Coal.

The total production of coal in West Virginia in 1907 was 48,091,583 short tons, having a spot value of \$47,846,630. In 1906 West Virginia displaced Illinois for second place among the coal-producing States, but her triumph over Illinois was of short duration. As a result of the suspension in 1906, ranging from two months to ten weeks at most of the Illinois mines, pending an adjustment of the wage scale, the coal production of Illinois was materially restricted, whereas in West Virginia, where most of the miners are unorganized, operations were carried on practically without interruption, and that State outranked Illinois, with a lead of 1,810,246 short tons. The record for 1907, however, showed that the production of Illinois made a phenomenal increase of 9,837,042 short tons, more than double West Virginia's increase of 4,801,233 short tons, and West Virginia again dropped to third place among the coal-producing States. Compared with that of 1906, West Virginia's coal production in 1907 showed an increase of 4,801,233 short tons, or 11.09 per cent., in quantity, and of \$6,794,691, or 16.55 per cent., in value.

Buys Coal and Timber Land.

A dispatch from Sergeant, Ky., states that the Rockhouse Realty Co. of Big Stone Gap, Va., C. Bascomb Slomp, president, has just closed negotiations for the purchase of 4000 acres of coal and timber lands located on the Cumberland river in Harlan and Letcher counties, Kentucky. It is stated that the property contains seven distinct coal seams, some of them measuring seven and eight feet, of good coking quality, while there is an abundance of several kinds of timber. The company is reported as to commence development work at an early date, which will be facilitated by the construction of the Cumberland river branch of the Louisville & Nashville Railroad, to be constructed from Wasioto, Ky., into the Cumberland valley.

United States Asphalt.

In 1907 the United States produced 223,000 tons of asphalt, valued at \$2,826,000, against imports of 160,000 tons, valued at \$648,000. Four years ago the total production and importations of the

United States amounted to but 240,000 tons; in 1907 the total of production and imports amounted to 383,000 tons, showing an increased use of over 150,000 tons. In 1887 only 4000 tons were produced in the United States, and in 1897 less than 76,000 tons. Deposits of the various forms of asphalt are found in Kentucky, Oklahoma, Utah, California, Texas, Wyoming, Kansas, Missouri and West Virginia. The location, character and general features of these deposits are described in an advance chapter from Mineral Resources of the United States, calendar year 1907, on the production of asphalt and bituminous rock, by J. A. Taff, now ready for free distribution by the United States Geological Survey.

West Virginia Mines.

The eleventh annual report of James W. Paul, chief of the Department of Mines of West Virginia, being the third annual report of the Department of Mines, has been issued for the year ended June 30, 1907. It embraces the twenty-fifth annual report upon the condition of the coal mines in the State, as reported by the several district inspectors, and, in addition to comprehensive statistics, contains comments upon the inspections made, labor in the mines, legislation, production of coal and coke, machine-mined coal, acreage mined, transportation, strikes, accidents, improvements, consolidations, wages, selling prices, etc.

Big Phosphate Contract.

Active developments continue to be noted in the phosphate districts of Florida, and a big contract has been awarded for stripping extensive beds in and around Bartow and Mulberry, Fla. This contract has been given to the Ferguson Contracting Co., 37 Wall street, New York. It involves the moving of several million yards of earth, and will extend over a period of several years. The contractor has installed considerable machinery, and is placing new and additional equipment to meet requirements. W. C. Merritt is in active charge, with offices at Mulberry, Fla.

Negotiating Coal Land Deal.

A dispatch from Chester, W. Va., states that Pennsylvania capitalists, including Col. H. M. Reynolds of Philadelphia, are negotiating for the purchase of 2000 acres of coal land near Chester. The property is said to contain valuable mineral deposits, and if the deal is consummated it is understood that active mining operations will be commenced early in the fall.

It is announced that E. P. Murphy & Son, Inc., of Richmond, Va., has closed a contract with the Richmond, Fredericksburg & Potomac Railroad to supply the road with anthracite coal, which is to be delivered in carload lots at Alexandria, Quantico, Milford, Fredericksburg and other points along the line.

Industries Needed at Chickasha, Okla.

Among the flourishing cities of the new State of Oklahoma is Chickasha, a railway, commercial and manufacturing center of West and South Oklahoma. This city needs various industries, principally a stonery and mill and all kinds of structural iron for bridging and buildings. The Commercial Club, Cad Allard, secretary, is endeavoring to secure the establishment of these enterprises, and invites inquiries for information regarding the possibilities for them.

The American Institute of Mining Engineers will hold its annual meeting at Birmingham, Ala., in September, but will conclude its sessions at Chattanooga.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Yellow Pine Manufacturers.

At the semi-annual meeting of the Yellow Pine Manufacturers' Association, held in Chicago last week, Secretary George K. Smith reported that statistics from 70 mills in Missouri, Oklahoma, Arkansas, Texas, Louisiana, Mississippi, Alabama, Georgia and Florida show a total stock on hand July 1, 1908, of 194,966,921 feet. The same mills reported a total stock on hand January 1, 1908, of 287,035,218 feet, the present stock on hand, therefore, showing a net decrease of 92,068,297 feet. Three hundred and fifty-five mills in the same States, reporting on all questions, give a total stock on hand July 1, 1908, of 1,069,451,345 feet, as against a total of 1,312,714,879 feet on hand January 1, 1908. A comparison of production and shipments made by 157 mills for the first five months of 1907 and 1908 shows a decrease in the production of 334,000,000 feet, or 27 per cent., and a decrease in shipments of 297,000,000 feet, or 23 per cent. During the first six months of 1907 the shipments among 325 mills exceeded the production 61,000,000 feet, making a decrease in stocks of 3 per cent. During the first six months of 1908, among an equal number of mills, shipments have exceeded the production 157,000,000 feet, making a decrease in stocks of nearly 12 per cent.

Durability of Cypress.

The remarkable durability of cypress wood has been given a fresh and striking demonstration through the excavation in New Orleans of an old coffin with the date of 1803 carved in the wood. While some workmen were recently engaged in digging trenches for the new sewer system, now well on toward completion, a forgotten burial place was encountered at St. Louis and Basin streets. There a coffin made of cypress was found in such an excellent state of preservation that except for a little discoloration of the wood it was as sound as the day it was made. In previous instances where old forgotten burial places have been encountered in excavation work in New Orleans no dates or names have been decipherable, as the metal plates were too badly corroded to be legible. In this case the name and date, "Hendric Miller, 1803," cut in the cypress wood were as sharply outlined as if but a few years instead of more than a century had intervened. The fact that the hand-wrought nails in the wood were not rusted seems to dissipate the theory sometimes advanced that cypress contains an acid which will rust nails, to the detriment of the wood for shingles or other outdoor uses.

State Forestry.

For the purpose of rendering assistance to timber land owners of the State in the better protection and preservation of their timber interests, it is announced that the North Carolina Geological and Economic Survey has offered the services of the State forester, who will give owners advice and prepare plans for them showing the best methods of cutting and protecting the timber. The State forester will personally examine land when requested to do so by the owners, provided there are not less than 500 acres at one place to be examined, which may not necessarily belong to one person.

No Sale Made.

In reply to an inquiry as to the correctness of a report from Washington, D. C.,

of a sale of timber land in West Virginia by the Baltimore & Ohio Railroad, Mr. George F. Randolph, first vice-president of the Baltimore & Ohio, writes to the MANUFACTURERS' RECORD:

"I beg to advise that there is no truth whatever in the statement that we have sold 200,000 acres of West Virginia forest lands to any concern. It is a matter of surprise to us that newspapers will use their columns for reiterating baseless items of this kind, which have been denied time and time again."

Macon's Building Report.

The building inspector of Macon, Ga., reports that 133 building permits were issued in that city during the period extending from December 17, 1907, to July 21, 1908, involving an estimated expenditure of \$191,765. Included in this number were six permits for brick structures, estimated to cost \$45,916; six for additions to brick structures, to cost \$5840, and 121 for residences, additions, stores, etc., to cost \$141,000.

Box Shooks and Cooperage.

The Woodstock Hardwood & Spool Manufacturing Co., Box 615, Charleston, S. C., is in the market for large quantities of box shooks and cooperage for export and domestic trade.

According to the quarterly report of the building inspector of Norfolk, Va., permits were issued in that city from April 1 to June 30, inclusive, for structures estimated to cost \$535,105.

Cement Products Association.

The proceedings of the fourth annual convention of the Northwestern Cement Products Association, held at Chicago last December, and of the third annual convention, held at St. Paul, Minn., in January, 1907, have been published in attractive pamphlet form under the editorship of President Martin T. Roche of St. Paul, Minn. The pamphlet contains the stenographic reports of the addresses and the discussions on a vast range of topics bearing upon the cement industry, its manufacture and its uses, and other kindred subjects. The officers of the Northwestern Cement Products Association are: Messrs. Martin T. Roche of St. Paul, Minn., president; H. E. Murphy of Manitowish, Wis.; O. U. Miracle of Minneapolis, Minn.; C. O. P. Turner of Minneapolis, Minn.; A. H. Laughlin of Lisbon, N. D., and Lee D. Stover of Watertown, S. D., vice-presidents; J. C. Van Doorn of Minneapolis, Minn., secretary, and J. M. Hazen of Minneapolis, Minn., treasurer.

Clarksburg's Industrial Activity.

Among the progressive industrial cities in West Virginia is Clarksburg, and manufacturing activities there are increasing. The new plants located this year include the milk bottle and jar works of the Travis Glass Co., which has its buildings in course of construction and expects to begin production, employing 100 persons, about September 1. The Grasselli Chemical Co. has enlarged its plant, and the Phillips Sheet & Tinplate Co. will extend its facilities to an extent that will increase its employes to nearly 1000 persons. The Clarksburg Board of Trade is active in promoting the advancement of the city, and is distributing a booklet which presents timely and valuable data as to the developed and undeveloped resources of the Clarksburg section. The organization will give specific information to those who may contemplate locating where raw materials, labor, fuel and other advantages are obtainable at the minimum cost.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ALONG BIG SANDY.

Thence the Chesapeake & Ohio Will Connect With the Carolina, Clinchfield & Ohio Road.

In connection with the issue of \$2,000,000 of Big Sandy Railway first mortgage 4 per cent. bonds by the Chesapeake & Ohio Railway, President George W. Stevens of the latter has given out some interesting information concerning the proposed connection in Eastern Kentucky between the Chesapeake & Ohio Railway's Big Sandy division and the Carolina, Clinchfield & Ohio Railway, formerly the South & Western. Mr. Stevens is quoted as saying:

"When the proposed connection between the Big Sandy line and the Carolina, Clinchfield & Ohio Railway is completed it will offer the most direct and shortest route between the Ohio river valley and Great Lakes district and the Southeastern seaboard, permitting through shipments of freight from the Middle West to the Southern shipping ports, such as Savannah, Charleston, etc. By the establishment of this connection the Big Sandy line, in addition to the northbound coal tonnage now handled, should receive further business of this nature through the opening of coal mines controlled in the interest of the Carolina, Clinchfield & Ohio Railway."

The Big Sandy Railway is that part of the Chesapeake & Ohio system completed during the last few years between Whitehouse, Ky., and Elkhorn City, Ky., 85 miles. It also has a branch about eight miles long and opens up (in connection with the former Big Sandy branch and the river line from Ashland to Cincinnati) a low-grade division about 280 miles long for the heaviest trains.

The connection of the Carolina, Clinchfield & Ohio Railway with the Chesapeake & Ohio Railway is to be made through the breaks of the Big Sandy river, a mountain pass of great importance to the railroad, affording a comparatively convenient route through the range. An officer of the Carolina, Clinchfield & Ohio is reported as saying that construction is being pushed, and on the southern end of the route it is expected to run trains from Johnson City, Tenn., as far as Marion, N. C., by September 1. This includes the mountain summit line over the Blue Ridge, passing among some of the highest peaks of the range, but so skillfully surveyed that an easy grade is secured for the entire distance.

North of Johnson City the line runs via Kingsport, Tenn., to Speers Ferry, and through Clinch mountain, along Clinch river, to St. Paul, Va., where it will go through Big Sandy Ridge with a tunnel said to be three miles long, whence it will follow McClure's creek and the Russell fork of the Big Sandy river through the breaks of the Sandy to Elkhorn, Ky. This road is to make its southern connection at Bostic, N. C., with the Seaboard Air Line, but it is also intended to continue construction southward from Bostic to Spartanburg, S. C., where it will obtain other connections and enabling it to reach practically all important points in the South.

ROANOKE TO FLOYD C. H.

New Company Chartered to Build Through a Valuable Territory.

Mr. S. G. Whittle, Jr., secretary and treasurer, writes from Roanoke, Va., to the MANUFACTURERS' RECORD concerning the Roanoke & Bent Mountain Railway

Co., lately chartered, and of which he is an officer. He says:

"The object of this road is to carry passengers and freight. The terminal points named in the charter are Roanoke City and Floyd, making the length of the line about 45 miles. While the charter permits it to operate with any motive power, the supposition is that electricity will be used. At present no connection with other roads is contemplated. The organization meeting has not yet been held, so no contract has been made with an engineer, nor with any contractor for construction or equipment.

"The territory traversed will furnish traffic in considerable quantity. There is now no railroad of any description through it. Contiguous to this route are large quantities of virgin forests and magnificent farming lands, which produce hay, corn, potatoes and other vegetables in abundance, and the finest apple orchards, among which the famous Albemarle Pippin is raised in large quantities, there being thousands of these trees in full bearing. These apples and other produce are now being hauled by wagons to market in Roanoke, Christiansburg and other points along the Norfolk & Western Railroad, covering a distance of from 15 to 60 miles. There are also considerable quantities of mineral near this line. Copper and arsenic mines are now in operation, the output being hauled by wagons a distance of from 20 to 30 miles to the Norfolk & Western.

"It is supposed that the directors at their first meeting will take the necessary steps to have a preliminary survey made, and when this is done, right of way secured and the approximate cost of construction ascertained the capital stock will have to be increased to the amount thus shown to be necessary."

The names and addresses of the officers and directors at present are W. H. Price, president, Elliston, Va.; J. Coles Terry, first vice-president, Bent Mountain, Va.; L. L. Greenwood, second vice-president, Cave Spring, Va., and S. G. Whittle, Jr., secretary and treasurer, Roanoke, Va. The directors are J. Coles Terry, Bent Mountain, Va.; J. C. Coles, Air Point, Va.; W. R. West, Salem, Va.; L. L. Greenwood, Cave Spring, Va.; Samuel R. Brame, Floyd, Va.; F. A. Thornberry, Roanoke, Va., and W. H. Price, Elliston, Va.

New Equipment, Rails, Etc.

A letter to the MANUFACTURERS' RECORD from Paxton, Fla., says that J. T. Hughes of Florala, Ala., who is applying for a street-railway franchise, will need four gasoline motor cars and eight miles of rail, with splice bars complete.

The Missouri Pacific Railway is reported to have let a repair contract of 1000 cars of various types to the American Car & Foundry Co.

The Columbia Street Railway of Columbia, S. C., is reported to have purchased two double-truck semi-convertible cars.

The Atlantic Coast Line, it is reported, is receiving bids on 50 phosphate cars of 80,000 pounds capacity each and 100 ventilated box cars of 60,000 pounds capacity each.

The Woodward Iron Co. of Woodward, Ala., is reported to have given an order to the Pressed Steel Car Co. for 10 ore cars.

Reported that the Virginian Railway Co. will purchase 2500 freight cars.

The Maryland Steel Co., Sparrows Point, Md., is delivering an order of about 11,000 tons of steel rails for the Mexican Central Railway, two steamers being required to handle them.

A. V. Kaiser & Co., dealers in railroad and contractors' equipment, 739 Drexel

Building, Philadelphia, are in the market for four standard-gauge gasoline motor cars and eight miles of rail, with splices complete for a street railway in Florida. They also want five standard-gauge box cars of 40,000 pounds capacity each.

Atlanta-Macon Electric.

The Georgia Securities Co., which is back of the proposed Atlanta, Griffin & Macon Interurban Electric Railway Co., has just held its annual meeting and is reported to be rapidly completing arrangements to begin construction work between Atlanta & Macon, 86 miles. This road is to be supplied with electric power by the General Georgia Power Co., which is building an electric plant and dam on the Ocmulgee river near Jackson, Ga.

W. Jordan Massee of Macon is president of the Georgia Securities Co., Seaton Grantland of Griffin is vice-president, John T. Moore of Macon is secretary-treasurer and Roland Ellis of the same city is general counsel. In addition to the officers, the directors are W. J. Kincaid and J. A. M. Brawner of Griffin, Isaac Lipstein of Atlanta, M. Felton Hatcher of Macon and Arthur Montgomery of Atlanta.

In addition to the road from Atlanta to Macon via Griffin, it is contemplated to build another line from Macon to Americus and Albany, Ga., 100 miles.

Electric Railways, Light & Power.

The Charlotte Power Co., chartered under New Jersey laws by residents of Charlotte, N. C., is, according to a report from that city, organized for the purpose of building and operating an electric railway system, besides gas and lighting plants, in and around Charlotte. The stockholders consist of the Southern Power Co. of Charlotte and officers of the latter corporation. It is also said that New York capitalists are interested and a permanent organization will be perfected in a few weeks.

It is contemplated to build an electric railway system to connect Charlotte with nearby towns. The capital of the new company is \$300,000 subscribed, and among those concerned are W. S. Lee, vice-president and chief engineer; L. C. Harrison, assistant secretary; R. B. Arrington and W. H. Martin, respectively, treasurer and assistant treasurer, all being of the Southern Power Co., which has been operating plants on the Catawba river and other streams for the last year or two.

An Oklahoma Electric Plan.

A dispatch from Sulphur, Okla., says that construction is to begin immediately on the proposed Coalgate, Sulphur & Western Electric Railway from Sulphur toward Oklahoma City. The route is via Davis, Wynnewood, Pauls Valley and Lexington. The company has \$3,000,000 capital, with A. C. Frost, president, and W. H. Shanner as vice-president. A general freight and passenger business is to be conducted. Mr. Frost, who is president of the Chicago & Milwaukee Electric Railroad, is reported to have just made an investigation of the proposed route in company with W. H. and F. L. Shanner and Otto R. Hanson of Chicago. They are quoted as saying that the project will succeed. The right of way and surveys of the old road, which was projected by residents of Lexington, Okla., and other points, are to be taken over by the new company, and work is to begin in 30 days.

Missouri Electric Railways.

The St. Louis, St. Charles & Western Railroad, an electric railway 18¼ miles long and operating 16 motor cars between St. Louis and St. Charles, Mo., has been

transferred to the Missouri Electric Railway Co., lately incorporated to take over various electric railway properties in St. Louis, Mo., including the United Railways of that city. The company proposes to lay a double track from the city limits to the German Orphans' Home, on the line of road just transferred.

The Missouri Electric Railroad Co. is controlled by the interests back of the United Railways, and the name of Richard McCulloch, assistant general manager of the latter, heads the list of incorporators. The St. Louis, St. Charles & Western Railroad property includes the St. Charles County Bridge Co., which has a bridge 2700 feet long across the Missouri river.

Nashville to Franklin.

The Nashville & Columbia Interurban Electric Railway Co., Nashville, Tenn., is reported to have let a contract to the General Electric Co. of Schenectady, N. Y., for its electric equipment. The roadbed and bridges between Nashville and Franklin, Tenn., are said to be nearly completed, and tracklaying is to begin August 1. Everything is being done to hasten completion of the line, which President Mayberry is quoted as saying will require about two months longer. The Franklin division will be put in operation first. It is 20 miles long, and the cars will enter Nashville on the line of the Nashville Railway. Construction to Columbia and Mt. Pleasant is not to be started until after the Franklin division has been operated for some time.

Columbus to Montgomery.

The movement to build a railway from Columbus, Ga., to several points in Alabama has progressed so far that after a meeting of the committee which the Columbus Board of Trade appointed to consider the proposition it was decided to apply immediately for a charter for the Montgomery & Columbus Railroad Co. J. Albert Kirven is chairman of the committee, and the proposed route from Columbus to Montgomery would, it is said, shorten the distance 22 miles as compared with existing roads between the two places. It is contemplated to build from Columbus to Crawford, Ala., 13 miles; to Marvyn and Society Hill, Ala., 28 miles; then to Tuskegee, 45 miles, and then to Montgomery, a total distance of 78 miles.

Trackless Trolley Cars.

D. J. Duncan, until recently manager of the Chattanooga Railways Co., is reported by the Chattanooga Times as meeting with much encouragement for his proposed trackless trolley line from Chattanooga to Fairmount, Tenn. The line is to start at 9th and Chestnut streets, in the city of Chattanooga, and to run to the summit of Walden's Ridge. The trackless trolley system is operated with large vehicles resembling big automobiles, but equipped with electric motors, which receive current from overhead wires like those used for a street railway. No track is necessary. It is said the cars can make 18 miles an hour on level ground. This system, or one resembling it, has been used abroad for some time.

Texas Has Over 13,000 Miles of Line.

The chief engineer of the Texas Railroad Commission has issued a statement showing that during the fiscal year ended June 30 there were built in that State a fraction more than 341 miles of railroad, making the total mileage in Texas approximately 12,917 miles. In addition to this, there are 112 miles of interurban electric railway and about 300 miles of private railroads, including log and tram lines, so that, considering public-service compa-

nies alone, the State has more than 13,000 miles of railroad. He says that railroad building is practically at a standstill in Texas, but that the State was never more prosperous, and that such a condition of inactivity cannot long exist.

Tampa Northern to Extend.

President Henry M. Atkinson of the Tampa Northern Railroad, who has just visited the terminals at Tampa, Fla., is quoted in a dispatch from that city as saying that the line will be extended to Thomasville, Ga., to connect with the Atlanta, Birmingham & Atlantic Railway, of which he is also president. Mr. Atkinson is further reported as saying that early in October a steamship line will be put on to connect with the Tampa Northern at Tampa, Fla., for direct service between that port, Brunswick, Ga., and New York city, and also to Texas points.

Nashville & Huntsville Begun.

Construction has begun near Huntsville, Ala., on the Nashville & Huntsville Railway, Tracy W. Pratt breaking the first ground for the line. W. J. Bennett & Co. are the contractors, and J. E. Toney also has a contract for another section five miles long, upon which he will begin work soon. Other bids are being received for the rest of the grading. The building of this line will take in the grade of the Cincinnati, Huntsville & Birmingham Railway at many places, as this old road can be used by making some repairs.

About Manatee County.

The Seaboard Air Line Railway's industrial department has issued an interesting pamphlet about fruit and vegetable growing in Manatee county, Florida. It contains about 50 pages. Manatee county is on the west coast of the Florida peninsula south of Tampa. The book is full of interesting reading matter, and is well illustrated by neat halftones. J. W. White is general industrial agent of the railway at Portsmouth, Va.

An Electric Railway.

Mr. F. Vernon Aler of Martinsburg, W. Va., is counsel for the promoters of an electric railway in Berkeley county, but he informs the MANUFACTURERS' RECORD that at present he cannot give information concerning the company's plans. It has been reported that the proposed line would be extended into Washington county, Maryland.

Railroad Notes.

The Central of Georgia Railway Co., it is announced, will move its headquarters from Macon to Atlanta on August 1 as proposed by President J. F. Hanson. The railroad offices will be in the Candler Building.

Several officers and directors of the Virginian Railway, who have just made an inspection of the road, are reported as saying that out of the 422 miles of line from Norfolk, Va., to Deepwater, W. Va., 95 per cent. is completed, and that the line will be extremely valuable on account of its easy grade.

Major J. R. Porter, San Marcos, Texas, referring to the report that an interurban electric railway was to be built from Luling to San Marcos, writes the MANUFACTURERS' RECORD that as far as he knows nothing definite has been done toward construction, but that the line would cover a splendid territory, and, in his opinion, would be a paying investment.

The Trinity & Brazos Valley Railway, according to a report from Austin, Texas, is being rapidly improved and ballasted to handle tonnage from the Rock Island, the Frisco and the Colorado Southern sys-

tems. It is said that the ballasting will be heavy and that the road will be put in superior order, although for a new line it was able to handle an extraordinary amount of business last year.

The Asheville Fuel & Dray Co. of Asheville, N. C., has been given the contract to build the proposed electric railway of the Weaverville Electric Co. from New Bridge Station, on the Asheville Rapid Transit Line, to Weaverville, N. C., four miles, and work has been started. An automobile line has been established to accommodate travelers until the railway is finished late in the fall.

The Baltimore & Ohio Railroad Co. has issued its report for the fiscal year ended June 30. The gross earnings were \$73,608,781, a decrease of more than \$8,600,000 as compared with the next previous fiscal year, and the net earnings were \$19,457,902, a decrease of over \$7,900,000. The total income was \$22,800,000, a decrease of nearly \$8,350,000. The surplus for the year was \$7,000,000, approximately, as compared with more than \$16,160,000 last year.

The Mobile, Jackson & Kansas City Railroad interests have postponed until August 24 the annual meetings which were to have been held on July 22. These meetings were to provide for consolidating the Mobile, Jackson & Kansas City Railroad and its subordinate line, the Gulf & Chicago Railroad, under the name of the New Orleans, Mobile & Chicago Railroad Co., a company with that title having been incorporated some time ago. There was, however, difficulty in securing attendance at the meetings, and it was decided to adjourn for a month.

According to a report from Birmingham, Ala., the Atlanta, Birmingham & Atlantic Railway will furnish an eastern outlet for the Louisville & Nashville Railroad, whose tracks the A., B. & A. will use to enter Birmingham from Pelham, Ala., 19 miles. This trackage, however, will only be used until the new road completes its own line into the city. The Atlanta, Birmingham & Atlantic will also use the Birmingham freight depot of the Louisville & Nashville Railroad, and it is said that all arrangements now being made tend to show close relations between the two roads.

Building Good Roads.

Mr. Charles Dew of Pell City, Ala., in subscribing to the MANUFACTURERS' RECORD says:

"I want to take this occasion to congratulate you on the great fight you are making for the development of our Southern country. Yours has been a great work, and more widely still is its influence to be felt.

"St. Clair county, this State, has taken up and has under way at this time considerable highway improvement. Judge John W. Inzer is president of the Board of Road Commissioners, with Hon. W. S. Forman, judge of probate, secretary and treasurer. The work of the engineer in charge is in my hand. It is the intention of the board to improve permanently about 60 miles of road with the present bond issue. Several contracts are now under construction."

Automobile Lines.

An automobile line has been established between Smithfield and Selma, N. C., H. L. Mitchiner & Co. having put on one car, but they hope to soon have two touring cars and two runabouts in operation.

J. F. Robinson of San Angelo, Texas, who operates an automobile line between San Angelo and Big Springs, will, it is reported, operate another automobile line between Temple and Marlin, Texas.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

To Enlarge Shelby Mill.

The annual meeting of the stockholders of the Shelby Cotton Mills, Shelby, N. C., was held last week, and a dividend of 5 per cent. was declared. It was also decided to enlarge the plant by building an addition and installing 2500 spinning and 6500 producing spindles. At present the company operates 8500 ring spindles, 250 broad looms, etc., on the production of sheetings and yarns.

Bliss Silk-Throwing Co.

The Bliss Silk-Throwing Co. of Dickson City, Pa., states there is no truth in the report, mentioned last week, that it will build a modern mill structure at Alexandria, Va. But the company will probably fill the present building with machinery in the near future. At Alexandria the company operates 2000 spindles on commission silk-throwing, and has four other plants.

To Double Hosiery Mill.

The stockholders of the Rockwood Mills of Rockwood, Tenn., held their annual meeting last week and declared an annual dividend of 10 per cent. They also authorized the management to arrange for doubling the present capacity of 400 dozen pairs of hose daily by building an addition and installing machinery.

Contemplate Building Several Mills.

Frank E. Baldwin, Journal Building, Boston, Mass., representing New England capitalists, is investigating the cotton-manufacturing advantages of Augusta, Ga., and vicinity with a view to locating one or more mills in that section. It is stated that the capitalists contemplate building five or six mills in the South.

Bids for Electrical Equipment.

The Raleigh (N. C.) Cotton Mills will open bids on August 4 for electrical equipment, about 400 horse-power, to drive its textile machinery.

Textile Notes.

The Orion Knitting Mills of Kinston, N. C., has increased its capital stock from \$10,000 to \$100,000.

The Commercial Club of Louisville, Ky., is interested in a proposition to establish a mill for manufacturing worsted yarns.

The Virginia Consolidated Milling Co. of Petersburg, Va., has awarded contract to Chas. E. Manor of Stanleyton, Va., for the installation of a pair of 35-inch turbine wheels, with supply piping, head-gate fixtures and governor. The company operates 32,500 spindles and 810 looms, producing duck, sheeting, etc.

A dispatch from Lake Charles, La., states that right of way for the construction of a canal from Bayou Teche to the Mermentau river has been obtained, and that this puts the first section of the intercoastal canal in Louisiana up to the point of construction.

Pecan-nut nurseries in the neighborhood of Monticello, Fla., shipped during the past season 150,000 young trees, and are growing for next season 350,000 trees.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Watches, Motor Cycles, Typewriters, Etc.

H. Aunis Fils, Noimoutier, France, wants to arrange to represent American manufacturers of low-priced watches, table knives, white silver, inoxidized and English metal jewelry, column, wall and suspension lamps, bicycles, motor cycles, typewriters, duplicating and copying machines, etc. He writes: "For any of the goods I could procure concessionaires for the makers if desired on the following terms: For each article there shall be sent me a catalogue with complete detailed description in French of the different styles; no mention to be made of price. One sample of article ought to be sent to me personally, and in addition thereto as many samples as the manufacturer might desire concessionaires. The manufacturer shall allow me for each concessionaire the sum of 250 francs after the first order is made; all orders, as well as invoices, to pass directly through my hands, and my commission on all business to be 2 per cent."

Wanted for Russian Trade.

Joh. Stiller, 1 Mestschanskaja, Haus 19, Moscow, Russia:

"Having opened an agency for different goods, and being aware of the eminent importance of your assistance, I beg to address myself to you with the request to publish in your edition that I am desirous of entering into business affairs with American firms dealing in technical, chemical, electric, etc., goods, as well as in novelties in every branch."

Offers Cotton Carpets for America.

Pemabhai Lalbhai Mistry, Diksit street, Bakar via Bumbay, India:

"I have a cotton-carpet factory, and as I desire to send my cotton carpets of different sizes and different qualities at a cheaper price to Baltimore, I hope you will kindly send me a list of the merchants of Baltimore who can buy my cotton carpets. Please also send me a list of the sellers of cotton carpets in Baltimore and America."

Wants Starch Machinery.

Edgar Tripp, Port of Spain, Trinidad, wants "information as to where he can purchase machines for making cassava and arrowroot starch."

New Cotton-Oil Mill.

A report from Louisville, Ky., states that, pending the granting of special freight rates on cottonseed on consignments of seed from Southern cotton-growing territory by the railroad companies entering Louisville, the Falls City Cotton Oil Co. will incorporate with a capital stock of \$100,000 for the purpose of manufacturing cottonseed oil and other products. If the concessions are granted, it is stated that the company will erect a large plant at Floyd and K streets, where an option has been secured on a site, and will use about 25,000 tons of cottonseed annually. Among the incorporators of the company are Messrs. W. E. Woolens, J. J. Caffrey, C. P. Fink and Judge Matt O'Doherty.

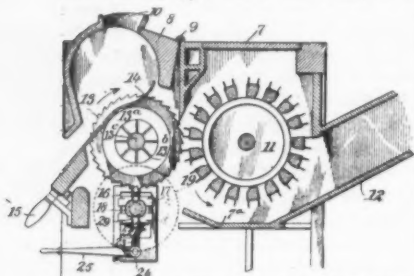
It is announced that the Southwestern Ice Manufacturers' Association will hold its annual meeting at New Orleans, La., in November. It has a membership of 200 scattered through Louisiana, Arkansas, Texas and Oklahoma.

MECHANICAL

Device for Cleaning Gin Saws.

Cotton ginner and others interested in gins will find their attention attracted to the accompanying view of the steel-brush attachment for cleaning gin saws. This device was invented by Mr. Fitzpatrick, for years connected with the ginnery of J. H. Rucker at Athens, Ga. Referring to the features of the invention, Mr. Rucker says:

"When gin saws come in contact with damp or green cotton they become clogged or gummed; the brush is unable to take away the lint, and the saws are put out of action. The Fitzpatrick attachment remedies this almost instantly; being of the finest steel wire, three and one-half inches in diameter, working in an adjustable bearing just under the saws, it is



THE FITZPATRICK DEVICE FOR CLEANING GINS.

thrown up to actual contact with the saws. Running at twice the speed of the saw, it sweeps the saw clean instantly. The adjustable bearings are moved by a cam working upon a rocker shaft, and the power is supplied by a friction wheel.

"Every ginner will bear testimony to the loss and annoyance of getting saws gummed, which means a complete stoppage of machinery and the slow process of taking the wet cotton off the saws by hand. And when it is remembered that nearly every fatal accident which occurs annually at gins is caused by green and wet cotton, the value of the attachment is more fully appreciated."

It is stated that the Fitzpatrick attachment has been thoroughly tested, and in actual use at Athens it has cleaned four 80-saw gins in less than three minutes, which would have required four employees at least two hours.

The Draper Company's Plant.

Managers of textile mills will be interested in the accompanying view of the

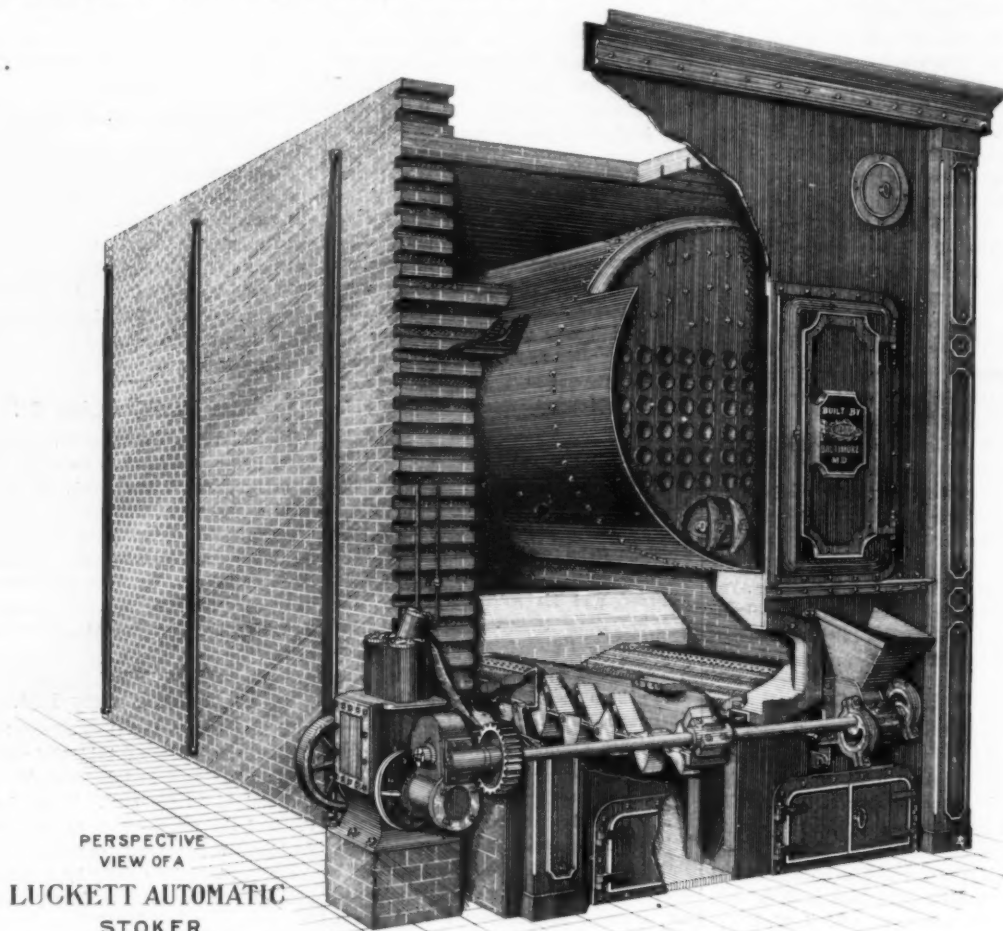
sign, materials and labor. In 1870 the company offered the double spinning ring invented by Wm. T. Carroll, and although the original patent expired long ago, the company's close attention to processes of manufacture and quality of output has held a large share of the ring trade. Last year the company's rings were registered under the trade name of "Mirror." About

of 1901 by the entire loss of the spindle-maker's plant by fire, the company took up the manufacture of spindle blades and designed special machines, some of which were patented.

With similar conditions in regard to the subject of bobbins, namely, the difficulty at times of obtaining them in sufficiently large quantities to give proper service to

The Lockett Automatic Stoker.

Engineers and steam consumers will be interested in a description of the Lockett automatic stoker (illustrated herewith) in daily operation at the boiler and machine works of the E. J. Codd Company, 700 to 708 South Caroline street, Baltimore, Md. The stoker is simple in construction, and

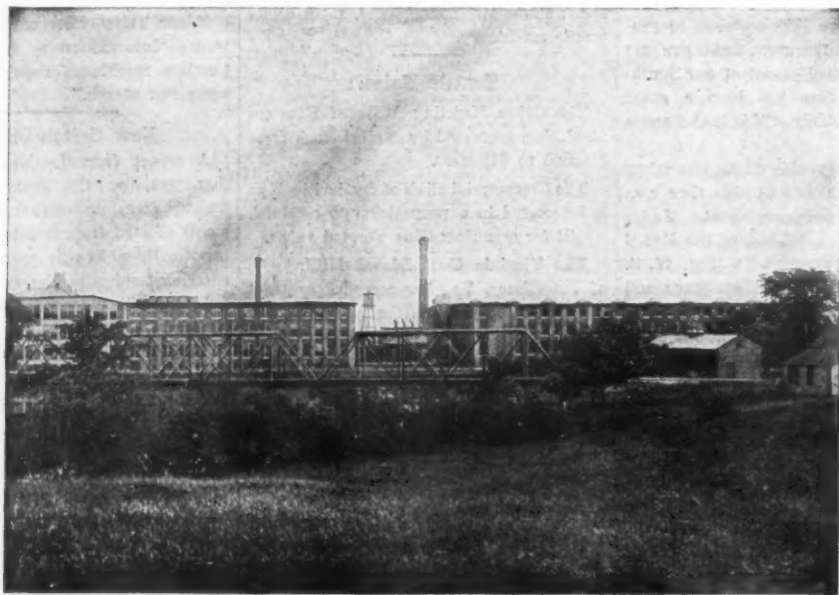


THE LOCKETT STOKER.

1872 the company took up the sale of the Sawyer spindle, the first to replace the old style of heavy common spindle. From that time inventions have developed and processes have been improved, and the company's Rabbeth patent centrifugal clutch spindle of today is well known. Finding it difficult to obtain spindle blades

customers, and with view to more definitely improving the quality as well, the company began four or five years ago to fit up tools and machinery for manufacture of the special bobbins used in the Northrop loom. These bobbins are inspected and tested most carefully during the various stages of manufacture, both as

its operation can be readily understood. In the furnace there are two magazines so placed that each one will take care of half the furnace width. On the sides of these magazines are the grates, which incline down toward the center and sides of furnace. At the front end of each magazine is a hopper, to which the coal is fed either by the fireman or by chutes leading from the bottom of coal bins overhead. Now, after the coal is conveyed in the hoppers the same is conveyed into the furnace by what are termed conveyors, the number of same depending on the depth of furnace. These conveyors oscillate about a shaft and work alternately; that is, while one is moving up the other is moving down. By this action the coal drops or fills in front of the conveyors; the first one pushes it back under the dead plate, and as it reaches its extreme forward position the second conveyor has reached its extreme lower position and takes the coal that has been conveyed forward by the first conveyor and pushes it up the inclining bottom, known as uptakes, which is then partly thrown over the top of same to be conveyed by the third conveyor and partly pushed to the fire surface. This process is repeated by the succeeding conveyors. The conveyors are set so that each succeeding one will take a certain proportion of the coal conveyed to same, leaving the remainder to be pushed to the fire surface. This proportion is constant, no matter how fast or slow the coal is fed. The portion of the coal in the course of being pushed to the fire surface is gradually heated and ignited,



THE DRAPER COMPANY'S PLANT.

Draper Company's plant at Hopedale, Mass. The pioneers of this company stood from the start for the best quality in de-

in rush seasons as fast as needed to meet the requirements of customers, and this being brought to a focus in the summer

regards running on the spindles in the spinning frames, and as to the service required after reaching the weaveroom.

and thereby formed into coke. The process being continuous, heaps up the formed coke above the magazine, which, partly through gravity and partly through the action of the conveyors, falls to the inclining grates on sides and is gradually worked to the center and sides of the furnace. The continuous oscillating motion of the conveyors gives a breathing motion to the fire bed, keeping it open and free for the circulation of air and doing away with

is particularly important, because, in addition to their use for heating water, the trays act as depositories for the carbonates of lime, magnesia, etc., which the water may contain.

"Filter Box.—Note the partitions in the generously proportioned filter box, compelling the hot water to slowly percolate up and down through its entire length, insuring the removal of any impurities that may have been retained in its passage

This is much better than the usual small manhole method, as it completely opens the heater for inspection and permits the easy withdrawal of trays, screen and filter box.

"Adaptability.—The Linton combination is made in either horizontal or vertical style, and can be adapted to various local conditions of space and piping. It may also be used only as a muffler and oil separator in connection with a closed heater."

Among Linton combination installations now in position in New York city may be mentioned the following: 3000 horse-power, singer Building; 3000 horse-power, Waldorf-Astoria Hotel; 3000 horse-power, Bush Terminals (Brooklyn); 2500 horse-power, City Investing Building; 1000 horse-power, Hanover National Bank; 750 horse-power, Madison Square Garden; 600 horse-power, Broadway Rouse buildings, and 450 horse-power, Fidelity & Casualty Co. Building. This last installation is significant.

Ironton Portland Cement Co.

Among the well-known manufacturers of Portland cement is included the Ironton Portland Cement Co. of Ironton, Ohio, whose extensive plant is herewith illustrated. This plant is said to be with one exception the only one constructed on the gravity plan in the United States. While the power of gravitation is not depended upon entirely, it is an important factor in handling the raw products from reception up to shipment in manufactured form.

Besides being erected on a foundation that reaches from the base half way to the summit of what many communities would consider a mountain, the Ironton plant is peculiar, in that its products all come direct from the mines to the mill under operations controlled by the same power that grinds the shale and lime and coal. They enter the upper end of the mill in their native state and come out at the bottom as finished cement.

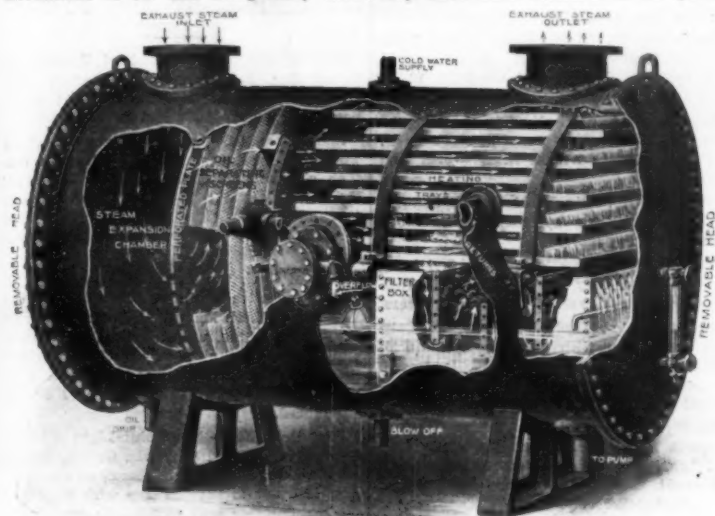
The company has several hundred acres underlaid with limestone, and the shale is

ing Co. of Chicago, thence into a 5x40 rotary drier, thence into Williams & Jeffrey swing-hammer mills, which crush it down to 90 per cent. on a 20 mesh for tube mill feed. Thence it is passed into large storage bins, and then ground in three 5x22 Bonnot tube mills, in connection with Emerick separators, to a fineness of 97 per cent. on a 100 mesh. Then it passes into storage bins in the rear of four 100-foot rotary kilns. After passing through the kilns the clinker discharges into the rotary cooler and then into an Austin fine crusher, which crushes it down to a three-quarter-inch clinker and finer. From there it is elevated to a vertical cooler, the material from which is then ground in four Kent mills, in connection with four Newaygo separators, to a fineness of 98 per cent. on a 20 mesh. The product is then finished on three 5x22 tube mills, in connection with Emerick separators, to a fineness of 97 per cent. on a 100 mesh, and from there it passes into a warehouse containing 12 bins with a total capacity of 40,000 barrels. Here it is packed by automatic Richardson & Bates valve bagging machines, which also weigh it 95 pounds to the sack. It is then loaded direct into cars from the packing-room.

Power is furnished by one 750-horse-power Allfree engine, manufactured by the Ironton (Ohio) Engine Co., direct connected with a 500-kilowatt generator built by the Crocker-Wheeler Company of Amper, N. J., and two 400-horse-power engines built by the Russell Engine Co. of Massillon, Ohio, belt connected to two 250-kilowatt generators built by the Northern Electrical Manufacturing Co. of Madison, Wis. This furnishes electric power and lighting for the plant and mines. All machinery is electrically driven by independent motors.

The boiler-room is equipped with four batteries of water-tube boilers, two of 350 horse-power and two of 450 horse-power each.

Natural gas is used for fuel, and it ensures uniform burning and color. The laboratory is equipped for examinations



LINTON COMBINATION FEED-WATER HEATER, PURIFIER, OIL SEPARATOR, MUFFLER, RETURN TANK AND PUMP GOVERNOR.

the slice bar. In the center and sides of the furnace the grates are made to shake at will of fireman. The conveyors of each magazine are operated by arms and rods connected to two eccentrics attached to shaft in front of boiler, known as the stoker shaft. This shaft is driven by an engine placed at right angles to same, at the side of boiler, connected through a reducing work and spur gears. It is evident that the principle of feeding the coal continuously into the furnace below and the lifting effect of the conveyors does away with the opening of furnace doors for firing and slicing of fires. This saves the boiler and furnace from the objectionable inrush of cold air, and therefore eliminates smoke and destructive gases and maintains a uniform condition in the furnace and boiler.

The Linton Combination.

The Linton combination feed-water heater, purifier, oil separator, muffler, return tank and pump governor is represented by an accompanying sectional view. This equipment is manufactured by the Linton Machine Co. (controlled by Frank L. Patterson), 26 Cortlandt street, New York. In describing the equipment the manufacturer thus summarizes the leading features:

"Oil Separation.—A large section of the combination is devoted to purifying the steam before it comes in contact with the feed water; note the area of the steam expansion chamber where the velocity of the exhaust steam is reduced, the perforated plate to break up the steam and the wire mesh separating screens; each one of these three oil-separating devices used alone is considered sufficiently effective by some manufacturers, and the three combined is absolutely certain to remove all but the faintest trace of oil from the exhaust steam. A perfectly tight diaphragm prevents the liberated oil from coming in contact with the feed water.

"Heating Surface.—The economical arrangement of space permits an unusually large amount of tray surface in proportion to the rated capacity of the heater. This

over the trays. Any good filtering substance, such as coke, may be used, and the box, being on rollers, may be easily taken out when it is desired to renew the material.

"Governor.—Controlled by a reinforced copper float, it has a very sensitive balanced valve, and may be arranged to either regulate the steam for the boiler-feed pump or the cold-water inlet to the heater.

"Returns.—The design of the Linton combination, with its large water-storage



IRONTON PORTLAND CEMENT CO.'S PLANT.

capacity, makes it especially adaptable for a receiver or return tank. The returns from the heating or drying system are passed over the lower trays, where they regain the few degrees of heat they have lost and then pass through the filter before mingling with the pure hot water in the tank.

"Accessibility.—The entire head is removable from each end of the heater without interfering with any pipe connections.

found in adjoining strata. One hundred men are employed in the lime and shale banks, where electric drills are used along with an electric undercutter. The daily output is 300 tons of limestone and 60 tons of shale, which is carried from the depths of the mines to the mills by an electric tramway operating trains driven by an electric locomotive.

The limestone is dumped into a No. 5 crusher made by the Austin Manufactur-

and tests incident to Portland cement production. First organized with \$110,000 capital and building a plant for 400 barrels daily capacity, the company is now capitalized at \$300,000 and manufactures 1200 barrels of cement daily. S. B. Steece is president; F. C. Tomlinson, vice-president; J. R. Paul, secretary; A. C. Steece, treasurer and general manager; John A. Acker, superintendent; Guy La Forge, chemist.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Baltimore, Md.—B. T. Fendall, City Engineer, is preparing plans for concrete bridge to be erected over Gwynn's falls at Hollins st.; cost \$11,500.

Chattanooga, Tenn.—American Bridge Co. of New York has contract at about \$41,000 to complete steel truss bridge over Chattanooga creek; bridge will have one pier and two abutments; two 85-foot girders about 170 feet long; will provide for three tracks; masonry work was completed some months ago by W. J. Oliver Company, Knoxville, Tenn., and cost about \$24,000, making total expenditure approximately \$65,000.

Cumberland, Md.—William Farris & Bros., 204 Diamond Bank Building, Pittsburg, Pa., have contract at \$14,000 (not \$4000 as recently incorrectly stated) for work on Wiley's Ford bridge over Potomac river at South Cumberland, including flooring and 700 yards of concrete, on which proposals are being received. (See "Machinery Wanted.")

Durham, N. C.—City and Norfolk & Western Railroad will construct bridge over railroad tracks in North Durham. Address The Mayor.

Macon, Ga.—Bibb county contemplates constructing bridge over Swift creek and another over Stone creek. Address County Commissioners.

Marlin, Texas.—Falls county has voted \$50,000 of bonds to build bridge over Brazos river at Belton crossing and to repair High Bank bridge over same river. John Wharton Maxey, Bins Building, Houston, Texas, is engineer. Address County Commissioners. (Noted in June.)

Pensacola, Fla.—Escambia County Commissioners contemplate constructing three bridges in connection with road improvements, to span Perdido river, Bayou Chico and Escambia river. Bond issue of \$200,000 for roads and bridges is under consideration. Address County Commissioners.

Richmond, Va.—Committee awarded contract to A. M. Walkup, Richmond, at \$4500 for repairs to Free bridge across James river, consisting of building four bents under each of the main chords of the eight weak spans. (Recently mentioned.)

Tilden, Texas.—McMullen County Commissioners will award contract August 12 for construction of steel bridge across San Miguel river; \$5000 of bonds recently reported voted; W. C. Wheeler, County Judge. (See "Machinery Wanted.")

Westville, Miss.—Simpson county's Board of Supervisors awarded contract to Converse Bridge Co., Chattanooga, Tenn., for construction of two steel bridges, one across Strong river, near Poina, at \$4283, and the other across Pearl river, at Mahoff's Ferry, at \$8362.

Williamsport, Md.—Washington & Berkeley Bridge Co., Edward W. Byron, president, awarded contract to Pennsylvania Steel Co., Steelton, Pa., at \$30,000, for steel work on bridge to be constructed across Potomac river at Williamsport, to Elmore & Hamilton, Albany, N. Y., at \$35,000, for concrete work; \$10,000 will be expended for flooring, grading, etc., making total cost of structure about \$75,000; piers and abutments will be of solid concrete and superstructure of steel; bridge will consist of 14 100-foot and two 90-foot spans; will be 1600 feet long and about 24 feet wide, with accommodations for trolley track, wagonway and foot path; excavating and work on piers will begin within 30 days. Mason D. Pratt, Harrisburg, Pa., is engineer in charge. (Recently mentioned.)

CANNING AND PACKING PLANTS

Angleton, Texas.—T. L. Downing, J. W. Christian, J. W. Munson and others are promoting establishment of cannery.

Biscayne, Fla.—Biscayne Conserve Co. incorporated with \$30,000 capital stock; G. A. McKinnon, president; George O. Butler, treasurer; T. V. Moore, secretary.

Corpus Christi, Texas.—Coleman-Fulton Pasture Co. contemplates establishment of packing plant.

Corpus Christi, Texas.—Coleman-Fulton Pasture Co. contemplates establishing abattoir and packing plant.

El Campo, Texas.—Lindale Canning Co. incorporated with \$10,000 capital stock by J. W. Ogburn, John S. Ogburn and Paul P. Cooper.

Glencoe, Ky.—Glencoe Canning Co. incorporated with \$7000 capital stock; has mill construction building, 50x60 feet, costing \$45,000; machinery cost \$500; daily capacity, carload of tomatoes, and expect to double next year; will probably add manufacture of horseradish; J. L. Hendrix, president. (See "Machinery Wanted.")

Green Forest, Ark.—Green Forest Canning Co., J. F. Walker, president, has increased capital stock from \$10,000 to \$20,000.

Kansas City, Mo.—Schwarzschild & Sulzberger will rebuild packing plant reported destroyed by fire; loss about \$50,000; new plant to be of brick or concrete.

Mt. Pleasant, Texas.—M. C. Wolfe, O. M. Tabb and others are promoting organization of company with \$10,000 capital stock to establish cannery.

CLAYWORKING PLANTS

Charlotte, N. C.—Bricks.—Carson Brick Co. will rebuild plant recently reported burned at loss of \$75,000; will erect by contracts; plant destroyed had 225-horse-power boiler, accompanying engine, 220-inch blower fan, kiln of 12 chambers, electric-lighting equipment, etc.; daily capacity was 50,000 bricks; new buildings to be of brick and steel, costing \$5000; company's president, J. E. Carson, is engineer and architect in charge.

Houston, Texas.—A. L. Molar is interested in organization of company capitalized at \$50,000 to establish plant for manufacture of lime and brick.

Monroe, N. C.—Heath Hardware Co., W. C. Wolfe, manager, has established plant to manufacture concrete tiling, bricks and building blocks.

Moulton, Ala.—S. C. Lee, New Decatur, Ala., will establish brick plant in Moulton.

COAL MINES AND COKE OVENS

Albany, Ky.—Thomas Dickens, T. Penny-cuff and others will, it is reported, organize company to develop coal deposits.

Barbourville, Ky.—F. D. Sampson (representing himself and well-known coal-mining interests) is continuing to acquire coal lands, which will be developed in the future; about 100,000 acres are now held.

Beckley, W. Va.—Campbell Coal Co. incorporated with \$25,000 capital stock by James A. Campbell, C. C. Rose, James O. McDonald and others.

Chester, W. Va.—H. M. Reynolds, Philadelphia, Pa., and associates are negotiating. It is reported, for purchase of 2000 acres of coal and mineral lands near Chester.

Clarksburg, W. Va.—Economy Coal & Lumber Co. incorporated with \$50,000 capital stock by T. L. Nutter, E. F. Goodwin, W. L. Lowe and others.

Huntington, W. Va.—Naugatuck Coal Co. incorporated with \$30,000 capital stock by T. J. Bryan, E. M. Watts, A. E. Bush and others.

Louisville, Ky.—Big Muddy River Consolidated Coal Co. has increased capital stock from \$100,000 to \$250,000.

Midland, Ark.—Jiacolietto Coal & Mining Co. incorporated by W. T. Quinley (president), J. C. Peal, Peter Clements and others.

Petersburg, Va.—Cockade City Coal & Coke Co. incorporated with \$10,000 capital stock; Spencer Vaughan, president; W. B. Beach, vice-president; H. A. Berry, secretary and general manager; James A. Gill, treasurer.

Sargent, Ky.—Rockhouse Realty Co., C. Bascomb Slomp, president, Big Stone Gap, Va., has, it is reported, purchased for development 4000 acres of coal and timber lands in Letcher county.

Strawn, Texas.—Strawn Coal Mining Co., Edward S. Britton, general manager, contemplates improvements at its coal mines, including screening plants and coal bins at each shaft and installation of electric plant for hoisting coal and shifting cars.

COTTON COMPRESSES AND GINS

Athens, Ga.—Company organized with \$100,000 capital stock to acquire and operate an established cotton compress and one now being constructed; John R. White, president; John E. Talmadge, vice-president; B. F. Hardeman, secretary-treasurer; S. Floyd Foster, superintendent.

Batesburg, S. C.—Batesburg Ginnery incorporated; A. C. Jones, president; E. Jones, vice-president; C. E. Jones, secretary and treasurer.

Campbell, Texas.—Campbell Union Gin Co. incorporated by J. A. Cole, R. Watts and M. N. Hopkins.

Eudora, Ark.—Eudora Gin, Water, Light & Power Co. incorporated with \$8000 capital stock; M. Schwartz, president; A. E. Allen, vice-president; H. M. Bailey, secretary; A. Flebleman, treasurer.

Gaffney, S. C.—Farmers' Oil Mill is correct name of company recently noted to erect oil mill and ginnery; R. C. Sarratt, president and treasurer; H. R. Elchberg, engineer in charge; buildings are being erected; six-gin system will be installed. (See "Cottonseed-Oil Mill.")

Perkins, Okla.—Farmers' Union Gin Co. incorporated with capital stock of \$12,000 by T. J. Willets, G. S. Barger, J. F. Ringwald and others.

San Angelo, Texas.—McFadden Compress Co., Brownwood, Texas, will erect \$50,000 compress at San Angelo.

Turner, Ark.—Farmers' Union Gin Co. incorporated with \$5000 capital stock; C. H. Duffel, president; R. T. Clark, vice-president; Alvan Smalley, secretary and treasurer.

Wideners, Ark.—Griggs Mill & Gin Co. recently reported incorporated with \$10,000 capital stock; W. B. Mann, president, Marlanna, Ark.; will erect eight-stand cotton gin; frame; capacity 80 tons; cost \$5000; cost of machinery \$5000.

COTTONSEED-OIL MILLS

Gaffney, S. C.—Farmers' Oil Mill is correct name of company recently noted to erect oil mill and ginnery; R. C. Sarratt, president and treasurer; H. R. Elchberg, engineer; ginhouse 40x54 feet is being erected; also oil mill 40x60 feet, and seed and hull house 70x100 feet; capacity of oil mill 20 tons.

Louisville, Ky.—Falls City Cotton Oil Co. to incorporate with capital stock of \$100,000 and build plant using 25,000 tons of seed annually; W. E. Woolens, J. J. Caffrey, C. P. Fink and Matt O'Doherty interested.

Zebulon, N. C.—Zebulon Cotton Oil Co. incorporated with \$50,000 capital stock by Archibald Meldrum, T. J. Horton, G. M. Bell

and others; to build one-press mill with daily capacity of 20 tons of seed; machinery ordered from Bushnell Press Co. of Thompsonville, Conn., and American Machine & Manufacturing Co. of Charlotte, N. C.

ELECTRIC-LIGHT AND POWER PLANTS

Birmingham, Ala.—Board of Revenue is considering installation of electric and steam-heating plant to light and heat courthouse and county jail; cost about \$10,000.

Boonsboro, Md.—Antietam Electric Light & Power Co. of Boonsboro has contract to furnish city with electric lights for 10 years; lights to include 29 50-candle-power and one 100-candle-power capacity. It is reported company will build water-power-electrical plant.

Charlotte, N. C.—Charlotte Power Co. incorporated with capital stock of \$300,000 by W. S. Lee, W. H. Martin, L. C. Harrison and R. B. Harrington, all officials of the Southern Power Co.; purpose, to build electric-light and power plants, gas plants, etc.; organization will be effected soon and details announced.

East Point, Ga.—East Point Light & Water Co. has engaged E. H. Davis, Griffin, Ga., as engineer and architect in charge of construction of plant to furnish city with light and water; building will cost \$2500; machinery, about \$9000; S. M. McCowell, City Clerk. (See "Water-works.")

Eudora, Ark.—Eudora Gin, Water, Light & Power Co. incorporated with M. Schwartz president. (See "Water-works.")

Fort Screven, Ga.—Electric Supply Co., Savannah, Ga., has contract to install electric lighting and power system in batteries, torpedo structures and range stations at Fort Screven; Col. Dan C. Kingman, U. S. Engineer, in charge of Savannah District.

Fredericksburg, Va.—City Electric Light Co. awarded contract to Chas. E. Manor of Stanleyton, Va., for 350-horse-power hydro-electric plant.

Humboldt, Tenn.—Board of Public Works has been authorized to purchase 210-horse-power engine and 150-kilowatt dynamo to be installed in electric plant.

Inverness, Fla.—Inverness Power Co., reported incorporated last week with \$25,000 capital stock, has not yet decided on plans as to cost of construction, amount of horsepower to be developed, etc., but awaits arrival of engineer in charge; Baxter Morrison, president; W. F. Warnock, secretary; F. M. Dampier, treasurer.

Kansas City, Mo.—W. F. Lyons will erect electric-power and ice plant; site 8½ acres; cost of buildings \$40,000. Mr. Lyons has applied for franchise to sell heat, light and power.

Lake Charles, La.—Lake Charles Railway & Light Co., reported incorporated last week, has capital stock of \$750,000 (not \$75,000, as previously stated); Thompson J. Bird is president.

Richlands, Va.—Town Council is planning construction of electric-light plant, water-works and sewer system; bond issue is proposed; C. B. Neel, chairman of committee. (See "Machinery Wanted.")

Strasburg, Va.—Rock Spring Electric Co. reported incorporated last week with \$25,000 capital, will establish electric plant and has contracted for machinery; B. H. Bowser, president; H. H. Copp, vice-president; C. M. Chiles, secretary. Mr. Bowser is architect in charge; John L. Livers of Lancaster, Pa., is engineer in charge.

Strawn, Texas.—Strawn Coal Mining Co., Edward S. Britton, general manager, is considering installation of electric plant for hoisting coal and shifting cars. (See "Coal Mines and Coke Ovens.")

Tampa, Fla.—Tampa Electric Co. has contracted with Stone & Webster Engineering Co., Stone & Webster Building, Boston, Mass., for enlargement of main power station and various improvements to light and power system; present building will be enlarged so as to accommodate two turbine units, with all necessary steam and electrical auxiliaries, in addition to present equipment; one turbo generator of 1500-kilowatt capacity, arranged to generate current at 2300 volts, with 520-horse-power water-tube boiler, will be installed at once; present 133-cycle overhead power circuits will be rebuilt to carry 60-cycle, 2-phase current, with corresponding changes in service connections, building wir-

ing and meters; overhead lighting circuits, which carry 133-cycle current, will be reconstructed for 60-cycle current and extended, and present meters will be readjusted or replaced by three-wire lighting and two-phase power meters; work planned is estimated to cost \$250,000. (Company recently mentioned to issue \$2,000,000 of bonds for improvements.)

Waynoka, Okla.—Waynoka Electric Light & Power Co.'s plant, recently noted to be established, will have capacity of about 800 incandescents; to be operated by steam; 25-horse-power engine installed.

FLOUR, FEED AND MEAL MILLS

Bedington, W. Va.—A. J. Lemaster has had plans prepared by R. H. Keller, Bedington, for grist mill recently mentioned; mill construction; 20x25 feet, 38 feet high; capacity 200 bushels of corn per day; two runs of burrs; cost \$1500.

Harrisonburg, Va.—Harrisonburg Milling Co. awarded contract to Chas. E. Manor of Stanleyton, Va., for additional flouring machinery and 125-horse-power induction motor for 300-barrel mill.

Lewisburg, Ky.—Lewisburg Milling Co., incorporated with \$10,000 capital stock by O. T. Sutton and associates, acquires established plant recently enlarged; daily capacity 60 barrels flour; will add corn shucker and sheller and feed grinder. (See "Machinery Wanted.")

FOUNDRY AND MACHINE PLANTS

Atlanta, Ga.—Car Wheels.—Decatur Car Wheel Co. incorporated with \$100,000 capital stock by W. J. Morrison, John W. Nute, W. F. Newbert and others.

Bluefield, W. Va.—Cloth Laying and Folding Machines.—Johnson Machine Co. incorporated with \$100,000 capital stock by T. S. Johnson, C. W. Thornton, G. M. Barger and others.

Bristol, Va.—Tenn.—Boilers, etc.—Twin City Boiler and Sheet Iron Works incorporated with \$15,000 capital stock; Henry Ehret, president; I. P. Oakes, vice-president; J. G. Tilley, secretary; company will erect 50x100-foot building of mill construction, to cost \$1200; will open bids October 1 for plant machinery; no architect or engineer selected; offices, 304 8th street. (See "Machinery Wanted.")

Chattanooga, Tenn.—Mine Cars, etc.—Southern Manufacturing & Supply Co. has changed plans and will enlarge main factory building now under construction from 120x120 feet to 120x200 feet; concrete and steel; galvanized-iron roof; architects, Adams & Alsop, James Building, Chattanooga.

Columbus, Ga.—Iron Works.—Columbus Iron Works Co. has increased capital stock from \$120,000 to \$600,000.

Eunice, La.—Machine Shop.—C. B. Eads and associates will establish machine shop; two lathes, drill press, shaper, emery grinder, etc., will be installed.

High Point, N. C.—Central Foundry & Machine Co. incorporated with capital stock of \$50,000 by Wilkes McClave and G. A. McClave of High Point and E. W. McClave of New York.

Houston, Texas.—Sheet Iron.—W. H. Rogers, Birmingham, Ala., will establish plant at Houston to manufacture sheet-iron articles and paint.

Knoxville, Tenn.—Mining Car Wheels.—Bull Automatic Tipple Co. incorporated with \$5000 capital stock by Joe Vasey, C. E. Oldroyd, Ralph L. Rogers and Jesse L. Rogers to manufacture mining-car wheels, tipples, etc.

Longview, Texas.—Farm Machinery.—G. A. Kelly Plow Co. will increase capacity of plant.

Louisville, Ky.—Saws.—Kentucky Saw Works incorporated with \$6000 capital stock by James B. Senior, G. G. Summers, Abraham Levy and others.

Louisville, Ky.—Stoves.—Baxter Stove Co. organized with R. Wise president; will manufacture small collapsible stove for camping purposes, etc.

New Orleans, La.—Pattern Factory.—Bancroft, Ross & Sinclair will establish pattern factory.

Rockingham, N. C.—Foundry.—Rockingham Foundry & Machine Co. incorporated with \$8000 capital stock by W. A. Biggs, L. C. Sharpe, W. P. McRae and Everett Hardware Co.

St. Albans, W. Va.—Mine Cars and Car Wheels.—C. C. Beury, W. E. Mohler and G. W. Atkinson, all of Charleston, W. Va., will, it is reported, construct plant for manufacturing mine cars and car wheels.

Winchester, Ky.—Castings.—Eagle Casting Co. has increased capital stock \$15,000 and will make improvements to plant.

GAS AND OIL DEVELOPMENTS

Chelsea, Okla.—X. I. T. Oil Co. incorporated with \$8000 capital stock by N. B. Dannenburg, Joseph D. Hogue, William H. Clark and others.

Mart, Texas.—Edna Oil Co. incorporated with \$45,000 capital stock by H. F. Meyer, G. R. Strange, J. H. Punched and others.

Shreveport, La.—Broussard Oil Co. incorporated with \$50,000 capital stock; B. F. Broussard, president; M. A. Currie, vice-president; A. G. Curtis, secretary and treasurer.

Sinton, Texas.—Sinton Oil Co. incorporated with \$8000 capital stock by D. O'Dell, P. A. Hunter and G. D. McGloin.

Tulsa, Okla.—Neha Oil & Gas Co. incorporated with capital stock of \$10,000 by W. H. Bagley, W. H. Reese and F. D. Misener.

Wellsburg, W. Va.—Amazon Oil & Gas Co. incorporated with \$100,000 capital stock by W. H. Hoyt, T. A. Chapman, Henry G. Emig and others.

ICE AND COLD-STORAGE PLANTS

Baltimore, Md.—Vacuum Ice Co., 28-40 South Front street, has issued \$80,000 of bonds for construction of vacuum system ice plant, with capacity of 190 tons per day, to replace present plant; site 75x150 feet.

Farmville, Va.—W. C. Newman, Atlee, Va., will establish ice plant, as lately reported; daily capacity to be 10 tons; buildings to be of frame and galvanized iron.

Horse Cave, Ky.—T. N. England & Co. will build ice plant of five tons capacity daily. (See "Machinery Wanted.")

Kansas City, Mo.—W. F. Lyons will erect ice plant. (See "Electric Light and Power Plants.")

New Orleans, La.—Crescent City Slaughterhouse Co. will, it is reported, establish 50-ton ice plant; center freeze system will be installed.

IRON AND STEEL PLANTS

Clarksburg, W. Va.—Tin and Terne Plates, etc.—Phillips Sheet & Tinplate Co. will make extensive improvements to plant, recently noted, but is not prepared to state particulars at present.

Fort Worth, Texas.—Rolling Mill.—Fort Worth Iron & Steel Co. has reorganized and incorporated with \$160,000 capital stock as Texas Rolling Mill Co.; plant, which has been closed, will be modernized and equipped to produce 100 tons of merchant bars daily, besides cotton ties and track spikes and bolts; George W. Armstrong, president; W. H. Mills, vice-president, both of Fort Worth; E. A. Hughes, secretary and manager, St. Louis, Mo. (Recently noted under "Foundry and Machine Plants.")

Sheffield, Ala.—Iron Furnace.—Sloss-Sheffield Steel & Iron Co., J. C. Mabey, president, Woodward Building, Birmingham, Ala., suspended operations at Hattie Ensey furnace at Sheffield about 24 hours and then resumed; daily capacity about 200 tons; recent report referred to explosion.

LUMBER-MANUFACTURING PLANTS

Bibb County, Ga.—Massee-Felton Lumber Co., Macon, Ga., it is reported, has purchased and will develop about 272 acres of timber land in Bibb county.

Bon Secour, Ala.—Strong Mill Co., recently reported incorporated, will establish mill of 15,000 feet daily capacity; will erect sawmill and lumber sheds; C. A. Swift, president; E. W. Strong, vice-president and general manager; G. B. Swift, secretary and treasurer.

Chesterfield, Va.—Chesterfield Lumber Corporation incorporated with \$10,000 capital stock; L. W. Dunn, president; J. C. Goode, secretary; A. P. Diggs, treasurer.

Clarksburg, W. Va.—Economy Coal & Lumber Co. incorporated with \$50,000 capital stock by T. L. Nutter, E. F. Goodwin, W. L. Lowe and others.

Dixon, Ky.—Ohio Valley Tie & Lumber Co. incorporated with \$25,000 capital stock by R. W. Hunter, J. B. Mitchell, W. H. Dunnagan and others.

Grubbs, Ark.—Schneider-Stegall Lumber Co. incorporated by G. F. Schneider, P. P. Stegall and M. M. Stegall.

Gulfport, Miss.—Enterprise Lumber Manufacturing Co. incorporated with \$25,000 capital stock by J. A. Leathers, Gulfport; W. L. Wallace, Bay St. Louis, Miss., and Edward Wunderlich, New Orleans, La.

Kenbridge, Va.—E. A. Skillman will erect planing and saw mill; capacity 1000 feet; planing mill to be two stories, 32x48 feet; sawmill one story, 24x60 feet; cost \$1000; machinery (including sawmill, planer, molder, resaw, lath mill and heading mill) to cost \$3000. (Recently mentioned.)

Milton, Fla.—Escambia Land & Manufacturing Co., Pensacola, Fla., will, it is reported, establish sawmill near Milton.

Rocky Mount, N. C.—Tar River Lumber Co. incorporated with capital stock of \$300,000 by W. L. Croom and S. T. Anderson of Rocky Mount, N. G. Keeton and Howard E. Baker of Elmira, N. Y., and others.

Sargent, Ky.—Rockhouse Realty Co., C. Bascom Slomp, president, Big Stone Gap, Va., has, it is reported, purchased about 4000 acres of timber and coal lands near Sargent and will develop.

St. Louis, Mo.—Atlas Lumber & Supply Co. incorporated by William C. Bland, Joseph D. McAllister and A. B. Cherry.

MINING

Anniston, Ala.—Iron Ore.—Anniston Ore Co. incorporated by C. P. Gaboury, F. F. Gaboury and J. A. Gaboury.

Bartow, Fla.—Phosphate.—Prairie Pebble Phosphate Co. of Savannah, Ga., has awarded contract to Ferguson Contracting Co., 37 Wall street, New York, for stripping phosphate beds near Bartow and Mulberry; involves moving several million yards of earth and extends over six years; machinery now on site and more being installed; W. C. Merritt in charge, with offices at Mulberry, Fla.

Chitwood, Mo.—Lead and Zinc.—All Jack Mining Co. incorporated by O. E. Marshall, H. H. McNeal and F. M. Sharp, all of Joplin, Mo., to operate mine at Chitwood.

London, Ky.—F. D. Sampson, Barboursville, Ky., and associates have, it is reported, purchased mineral right on about 100,000 acres between London and Manchester, Ky.

Poplar Bluff, Mo.—Iron.—Ironite Company incorporated with \$50,000 capital stock by Irvin E. Gibbons, H. Duncan and John A. Meyer.

Ridgeway, Va.—Mica.—Pittsburg Mica Co. has leased building in which to store and split mica; will rebuild plant recently burned.

Stony Point, N. C.—Corundum.—J. M. Crowell plans to install machinery for developing corundum mines; equipment not purchased. (See "Machinery Wanted.")

Web City, Mo.—Lead and Zinc.—Chapman & Lennan incorporated with \$100,000 capital stock by G. Y. Chapman, Temple Chapman and T. F. Lennan.

Wytheville, Va.—Minerals.—G. W. Smith of Pittsburg, Pa., has, it is reported, purchased for development 1800 acres of mineral lands at \$35,000.

MISCELLANEOUS CONSTRUCTION WORK

Algiers, Station A, New Orleans, La.—Land Reclamation.—Oakdale Land & Improvement Co., incorporated with \$230,000 capital stock, is planning to develop Verret Canal & Land Co.'s tract, comprising about 3780 acres, valued at approximately \$220,000; land is now drained by Verret canal, connecting with Bayou Barataria, which will be made navigable; company proposes to install pumps and drainage machinery to reclaim land, and may co-operate with authorities of Jefferson parish in drainage system proposed from Gretna, La.; L. H. Marrero, Gretna, La., is president; W. W. Wall, New Orleans, La., vice-president. (Noted in June.)

Big Sandy, Texas.—Dam.—Texas & Pacific Railway, B. S. Wathen, chief engineer, Dallas, Texas, will rebuild Lake Everman dam.

Birmingham, Ala.—Heating Plant.—Board of Revenue is considering installation of electric-light and steam-heating plant for courthouse and county jail; cost about \$10,000.

Bledsoe, Ark.—Levee Construction.—St. Francis Levee Board, W. B. Miller, president, Memphis, Tenn., awarded contract to Roach & Stansell, Memphis, Tenn., at 27 cents per cubic yard for enlargement work on levee between Bledsoe and Kent, Ark.; about 455,000 cubic yards; cost about \$122,850.

Clarksdale, Miss.—Levee Construction.—Contract will be awarded July 23 for levee work; T. B. Dabney, chief engineer. (See "Machinery Wanted.")

Galveston, Texas.—Drainage.—Galveston County Drainage District No. 1 will vote August 29 on bonds for public system of drainage canals and laterals and for widening and deepening adjacent bayous and creeks; territory embraces about 44,000 acres, including cities of Alcoa, Arcadia and Alta Loma; estimated cost \$115,000. Address County Commissioners, Galveston.

Greenville, Miss.—Levee.—Mississippi Levee Commissioners will award contract August 3 for construction of about 900,000 cubic yards of embankment in Mississippi Levee District; Robert Somerville, assistant chief engineer. (See "Machinery Wanted.")

Louisville, Ky.—Lock Construction.—S. F. Crecellus, assistant engineer in office of Capt. H. Burgess, U. S. Engineers, has about completed plans for two steel gates to be used in new lock of Louisville and Portland canal; lock, which will be 80 feet in width, will be placed beside present lock, necessitating widening of channel to embrace proposed lock; it is planned to have 600 feet between upper and lower gates and to locate guard gates 53 feet high before entrance to locks, which will be used in case of floods and high water; movable dam or "bear trap" has also been designed to remove mud from locks; proposed improvements will involve expenditure of about \$2,000,000.

Mercedes, Texas.—Irrigation.—Monte Irrigation Co. incorporated with \$20,000 capital stock by S. P. Silver, F. E. Scobey and L. E. Bennett.

Miami, Fla.—Land Reclamation.—R. P. Davis and J. R. McKinnie, Colorado Springs, Col., will, it is reported, construct canals and reclaim about 30,000 acres of land in Dade county for sugarcane cultivation; total expenditure about \$1,000,000. (See "Miscellaneous Manufacturing.")

Miami, Fla.—Drainage.—Walter R. Comfort and John S. Huyler, New York city, and associates, recently reported as organizing company to develop 50,000 acres of land near Miami for sugar planting, propose, it is reported, to construct drainage canal 6 feet deep and 16 feet wide through south fork of Miami river, three or four miles; from that point dike will be built extending north one mile and east about two miles, enclosing 1800 acres of land; canal will join ditch at the west, made by building embankment to protect land from overflow from the glades.

Mobile, Ala.—Dredging.—Maury & Unruh, agents for Felix McGill estate, awarded contract to Bowers Southern Dredging Co., Galveston, Texas, for dredging Grant's Pass to a uniform depth of 10 feet; pass is 5000 feet long and 80 feet wide, and has a varying depth of not less than five feet. Plans are being prepared by Prof. P. C. Boudouque, consulting engineer, for keeper's house, contract for which will probably be let within 30 days; beacons will be built through pass; entire work will cost about \$12,000.

Mobile, Ala.—Wharves.—Birmingham & Gulf Transportation Co. is planning, it is reported, to build up its system of river navigation and to improve landing stages along its river routes, as well as terminal wharves at Mobile. T. H. Moore, Montgomery, Ala., is superintendent of Tidewater Development Co., parent company. Mr. Moore is registered at Cawthon Hotel, Mobile.

New Orleans, La.—Jetty Construction.—U. S. Engineers awarded contract to Oscar F. Barrett, Cincinnati, Ohio, at \$25,500 to furnish 6000 cubic yards of stone to be used in repairing jetties and in other work at the Passes.

New Orleans, La.—Levee Construction.—Contract will be let August 24 for constructing about 189,500 cubic yards of levee in Lower Tensas and Pontchartrain Levee districts; Wildurr Willing, First Lieutenant, Engineers, Mississippi River Commission, Fourth District, 1539 Louisiana avenue. (See "Machinery Wanted.")

Paducah, Ky.—Land Reclamation.—McCracken County Judge has appointed James Wilcox civil engineer, Oscar Rawlinson, R. E. Parish and J. B. Craig commissioners, to consider feasibility of draining Blizard pond, near Clark's river, reclaiming between 7000 and 8000 acres of land.

Port Allen, La.—Wharves and Elevators.—Southern Pacific Company does not contemplate construction of wharves and elevators, recently reported, in connection with plans for Port Allen.

Saline County, Ark.—Levee Construction.—S. L. Kay, Mutual Life Building, Little Rock, Ark., and associates, are planning, it is reported, organization of company to construct levee for preventing overflow of about 10,000 acres of land on Arkansas river in Saline county. Lund & Hill, Little Rock, Ark., will make preliminary survey; levee will be about 15 miles long, of which about seven miles will be new work; have average height of five feet and cost from \$20,000 to \$30,000; old levee will be repaired.

Sumter, S. C.—Drainage.—City's force will drain Saratoga branch by pipe line, under superintendence of City Engineer; no material, etc., needed. (Recently mentioned.)

Velasco, Texas.—Drainage.—J. C. Tolman of

Velasco, engineer, is drawing maps and plans of proposed drainage district; grade will average about two feet; \$45,000 bonds will be issued.

Wheeling, W. Va.—Dam.—Bids will be opened August 10 at U. S. Engineer's Office, Wheeling, for construction of abutment for dam No. 19, Ohio river; F. W. Altstaetter, Captain, Engineers. (See "Machinery Wanted.")

Wilmington, N. C.—Waterway.—Maryland Dredging & Contracting Co., Frank A. Furst, president, Fidelity Building, Baltimore, Md., has contract at 10¢ cents per cubic yard to dredge inland waterway from Pamlico sound to Beaufort Inlet, N. C., four miles in length; amount available under appropriation is \$358,000. (Recently mentioned.)

MISCELLANEOUS ENTERPRISES

Baltimore, Md.—Suburban Development.—West Forest Park Land and Development Association, 2303 Garrison avenue, has purchased for development Slingluff farm at Forest Park (suburb), consisting of 108 acres.

Baltimore, Md.—Suburban Development.—Pembroke Heights Corporation, care of Joseph W. Jenkins, Jr., Abell Building, Baltimore, has purchased 97 acres of land near Gwynn Oak Park (suburb) to develop for building sites.

Birmingham, Ala.—Steam Laundry.—American Laundry Co. incorporated with \$10,000 capital stock; Max Stern, president; Eugene Wertheimer, vice-president; B. L. Wertheimer, secretary and treasurer.

Bliss, Okla.—Grain Elevator.—W. W. Lockwood of Winfield, Kans., reported last week, has contract to build seed corn elevator for Miller Bros., 101 Ranch at Bliss; he manufactures his own supplies.

Chattanooga, Tenn.—Pleasure Resort.—B. F. Thomas has purchased about 30 acres of land and proposes establishment of pleasure resort; casino, cottages, etc., to be built.

Chickasha, Okla.—Steam Laundry.—W. H. Pritchett will expend \$10,000 in establishment of steam laundry recently mentioned; will erect two-story brick building 24x78 feet; machinery purchased.

Daytona, Fla.—Fire Protection.—City contemplates voting on \$50,000 bond issue for fire protection. Address The Mayor.

Fairmont, W. Va.—Printing Plant.—Free Press Printing Co. incorporated with capital stock of \$25,000 by H. C. Sample, E. A. Russell, A. A. Russell and H. J. McElfresh.

Fayetteville, Ark.—Steam Laundry.—Cliffens' Laundry Co. incorporated with \$500 capital stock; W. B. Collins, president; H. S. Price, vice-president; Sidney Vinson, secretary and manager; J. E. Crandell, superintendent; will remodel skating rink and equip with machinery.

Fort Smith, Okla.—Postoffice at Fort Smith, Ark.—Townsites.—Fort Smith Townsite Co. incorporated with capital stock of \$25,000 by F. T. Woolum, Van Buren, Ark.; T. B. Wall, Poteau, Okla.; J. J. Hardy, Chant, Okla., and others.

Jacksonville, Fla.—Crematory.—City contemplates purchase and installation of three plants for destruction of garbage, refuse, etc.; cost \$50,000.

Kansas City, Mo.—Land Improvement, etc. Parker-McIntosh Land Co., recently reported incorporated with \$50,000 capital stock, will deal in city properties and farming, fruit and timber land; Albert Parker, president; J. S. McIntosh, vice-president; G. E. W. Wilhelm, secretary.

Kansas, City, Mo.—Garage.—E. P. Moriarity will build garage to cost \$18,000; two stories and basement; fireproof construction.

Louisville, Ky.—Contracting.—Contractors' Building Co. incorporated with \$50,000 capital stock by William T. Hale, James T. Morris and Horace Lindsay.

Memphis, Tenn.—Amusement Park.—Luna Park Amusement Co. incorporated with \$100,000 capital stock; A. J. Weber, Nashville, Tenn., secretary and treasurer; J. L. Glass, Toledo, Ohio, general manager; will expend about \$150,000 in establishment of amusement park.

Nashville, Tenn.—Coal Handling.—Dealers' Fuel Co., recently noted to lease coal-handling plant of Crescent Coal Co., will soon be incorporated; is identified with Dealers' Fuel Co. (operating wholesale); construction of plant previously contracted to Howe Seale Co. of Illinois, Chicago, Ill.; plant to be turned over to new company in complete running order; C. W. Jackson, general manager.

New Orleans, La.—Contracting.—Danne-mann & Charlton Company incorporated with \$20,000 capital stock by Frank Danne-mann, E. Danne-mann and John F. Charlton

to continue established building and architectural business.

New Orleans, La.—Plumbing, etc.—Orleans Plumbing Co. incorporated with \$50,000 capital stock; Emilian Helmer, president; R. Delord, vice-president; James A. Buisson, secretary-treasurer.

New Orleans, La.—Steamboat Line.—Merchants & Growers' Transportation Co. incorporated with \$25,000 capital stock by Peter Cosulich, Paul Zibillien, J. B. Festerling and others, to operate steamboat line between New Orleans and lower-coast points.

Oklahoma City, Okla.—Contracting.—Pioneer Construction Co. incorporated with \$25,000 capital stock by W. A. Lovejoy, E. P. Spears and N. S. Sherman.

Pleasant Hill, Mo.—Flowers.—George M. Kellogg Flower & Plant Co. incorporated with \$30,000 capital stock by George M. Kellogg, George T. Rowe, Millard F. Parker and others.

Roanoke, Va.—Land Improvement.—Forest Park Corporation, W. C. Lawson, president, recently reported incorporated, has purchased 85 acres suburban property for residential development.

Spencer, W. Va.—Land Improvement.—Spencer Real Estate & Development Co. incorporated with \$10,000 capital stock by Lee Goff, Spencer; W. H. Fisher, C. I. Farnsworth, Buckhannon, W. Va., and others.

St. Louis, Mo.—Contracting.—W. H. Lester Construction Co. incorporated with \$10,000 capital stock by Will H. Lester, Charles C. Lester and Leo Steuwerwald.

Velasco, Texas—Coal Elevator.—E. D. Dorchester and associates awarded contract to W. T. Hall, Fort Worth, Texas, for erection of coal elevator at Velasco.

Waco, Texas—Cotton.—Crespi, Roenach & Co. incorporated with \$50,000 by Pio Crespi, M. M. Roenach and L. F. Cowan.

MISCELLANEOUS MANUFACTURING PLANTS

Baltimore, Md.—Overalls.—Standard Overalls Co., 413 West Pratt street, awarded contract to R. B. Mason, 324 West Biddle street, Baltimore, for erection of factory building, 35x125 feet, at Pratt and Penn streets.

Birmingham, Ala.—Paper Boxes.—Alabama Paper Box Manufacturing Co. incorporated with \$10,000 capital stock; C. C. Rhodes, president; E. W. Brandon, vice-president; A. M. Rhodes, secretary; John D. Elliott, treasurer.

Charleston, S. C.—Paper Boxes.—Charleston Paper Box Co. organized by W. S. Lammeau and E. H. Schirmer, Jr.; will establish plant for manufacture of paper boxes; building will be two and one-half stories; frame; 40x100 feet; electric power; each machine to have individual motor.

Fort Worth, Texas—Glass.—J. C. Madden, Sons & Co., Pittsburg, Pa., have, it is reported, purchased and will operate plant of Fort Worth Glass & Sand Co.; will expend over \$30,000 for improvements.

Greensboro, N. C.—Collars and Bridges.—Southern Collar & Bridge Co. will erect 60-foot addition to plant.

Hopkinsville, Ky.—Gloves.—Kentucky Glove Manufacturing Co. incorporated by Abe Meyers, Jacob Meyers and others.

Houston, Texas—Paint.—W. H. Rogers, Birmingham, Ala., will establish plant to manufacture paint. (See "Foundry and Machine Plants.")

Independence, Ky.—Stokers.—Thomas Locomotive Stoker Co. incorporated by George Washington, F. A. Buelow, M. H. Levi and others.

Jackson, Tenn.—Drugs.—Southern Drug Co., Henderson, Tenn., will, it is reported, establish plant in Jackson and increase capital stock to \$15,000.

Kansas City, Mo.—Nectarine.—Ihlenburg Nectarine Co., Cairo, Ill., R. L. Ihlenburg, president, contemplates establishment of \$50,000 plant in Kansas City.

Kenbridge, Va.—Tobacco Flues.—M. A. Chandler, recently reported to establish plant to manufacture tobacco flues, will erect building 40x20x40 feet; cost \$3000; daily capacity 3000 pounds; cost of machinery \$3000.

Little Rock, Ark.—Mattresses.—S. J. Beauchamp will, it is reported, establish mattress factory.

Martinsburg, W. Va.—Canvas Gloves.—Benjamin W. Byers has established factory for manufacturing canvas gloves.

Memphis, Tenn.—Buttons.—Memphis Button Works Co., recently reported incorporated, has awarded contract for erection of three-story frame structure and placed order for special machinery; will manufacture but-

tons from mussel shells; W. S. Watson, manager.

Miami, Fla.—Sugar.—R. P. Davis and J. R. McKinnie, Colorado Springs, Col., have, it is reported, purchased 30,000 acres of land in Dade county, Florida, which they will reclaim and drain for sugar-cane cultivation; sugar mill will be erected to cost \$500,000; total expenditures about \$1,000,000.

Morganton, N. C.—Gloves.—J. A. Shuping is establishing proposed plant to manufacture canvas gloves and mittens. (See "Machinery Wanted.")

Nashville, Ark.—Drugs.—People's Drug Co. incorporated with capital stock of \$10,000; J. M. Daley, president; W. M. Gibson, vice-president; W. J. Peppard, secretary.

New Orleans, La.—New Orleans Railway & Light Co. is completing arrangements for construction of foundation for additional gasholder; work consists approximately of 3500 cubic yards of excavation, driving 700 piles from 45 to 50 feet long and laying 700 cubic yards cement concrete; bids opened July 30; Joseph H. DeGrange, secretary.

Norfolk, Va.—Distillery.—Metzer Bros. incorporated with \$50,000 capital stock; Nathan Metzer, president; B. F. Metzer, secretary-treasurer.

Paducah, Ky.—Columbia Manufacturing Co. has changed name to Ed Roos Company and increased capital stock from \$35,000 to \$55,000.

Paducah, Ky.—Vinegar.—Gregory & Wallace Vinegar Co. incorporated with \$100,000 capital stock by Oscar L. Gregory, George C. Wallace and A. M. Ogilvie.

Petersburg, Va.—Doors, Sash, Mouldings, etc.—Interstate Supply Co., Chamber of Commerce, recently reported incorporated under "Miscellaneous Enterprises", will manufacture doors, sash and parts of house construction, including all flooring and mouldings, stair work and mantels; will purchase and install machinery to cost \$10,000; Charles Hall Davis, president; F. A. Cunningham, vice-president; E. L. Quarles, secretary and treasurer; A. L. Miller, superintendent. Address A. L. Miller, care of Homestead Corporation, No. 5 Monticello Arcade, Norfolk, Va. (See "Machinery Wanted.")

Reidsville, N. C.—Paper Boxes.—Reidsville Paper Box Co., recently reported incorporated, has elected J. B. Pipkin president, J. L. Butler vice-president, Francis Nomack secretary and treasurer, W. H. Foy general manager; will erect fireproof building with capacity of 2500 to 3000 boxes per day; approximate cost of machinery, \$2500.

San Angelo, Texas—Creamery.—Postmaster Blanchard and C. B. Metcalf are promoting establishment of creamery.

St. Louis, Mo.—Post Cards, etc.—American Post Card & Novelty Co. incorporated with \$60,000 capital stock by Hermann A. Haas, W. A. Fellmer, Rosa Haas and Kate Fellmer.

St. Louis, Mo.—Clothing.—Max Tzinberg Skirt, Suit & Cloak Co. incorporated with \$5000 capital stock by Max Tzinberg, Jacob Lasky and Mary Lasky.

St. Louis, Mo.—Wagon Umbrellas, etc.—Perfection Manufacturing Co. incorporated with \$50,000 capital stock by John A. Eberle, A. E. Meyer, Charles B. Kehrman and others; to manufacture wagon umbrellas and cloth and metal specialties.

St. Louis, Mo.—Novelties.—Rea Novelty Co. incorporated with \$10,000 capital stock by A. L. Y. Mueker, W. Dulaney Reese and B. A. Wilkie.

St. Louis, Mo.—Heating and Ventilating Apparatus.—Kauffman Heating & Engineering Co. incorporated with \$15,000 capital stock by Samuel Kauffman, Sim T. Price and Sim T. Price, Jr.

Thomas, Ga.—Fertilizer.—Bell Fertilizer Co. incorporated with \$25,000 capital stock; J. W. Bell, president; will erect plant and equip for manufacture of fertilizer.

Tulsa, Okla.—Oil Refinery.—Tulsa Refining Co., recently reported incorporated with \$100,000 capital stock, takes over established oil refinery; capacity, 200 barrels of oil; machinery includes tanks, pumps, pipe and fittings; G. H. Heager is general manager, architect and engineer; W. F. Ewing, treasurer; W. A. Porterfield, secretary.

Tulsa, Okla.—Gloves, etc.—Stone-Corlett Manufacturing Co. incorporated with \$10,000 capital; has secured 50x100-foot building and purchased machinery; will manufacture cotton gloves, garments and advertising specialties; Floyd W. Corlett, president; H. Stone, vice-president; R. M. Stone, secretary.

Washington, D. C.—Cigars.—Eldorado Cigar Co. incorporated with \$10,000 capital stock by S. D. Minster, 1200 Pennsylvania avenue N. W.; J. L. Prossie, treasurer, 1009 Pennsylvania avenue N. W.; H. G. Minster, 1109 Pennsylvania avenue N. W., and others.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Canadian, Texas.—Southern Kansas Railway Co. of Texas will erect roundhouse and machine shops at Canadian according to standard plans of Atchison, Topeka & Santa Fe Railway. Roundhouse will be 92 feet deep; 10 stalls; mill construction; cost \$30,000; contract awarded. C. A. Morse, Topeka, Kans., is consulting engineer. (Recently reported.)

Strasburg, Va.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will, it is reported, build roundhouse and machine shop at Strasburg.

ROAD AND STREET IMPROVEMENTS

Annapolis, Md.—City has voted negatively on bond issue of \$40,000, of which \$30,000 was to be expended for engine-house, paving and sewerage at Murray Hill, etc. Address The Mayor. (Recently mentioned.)

Baltimore, Md.—Flaser, Riley & Carozza, 613 American Building, Baltimore, have contract at \$20,272.77 to improve Falls road.

Basic City, Va.—City will vote July 28 on \$25,000 bond issue for paving, water-works and sewer construction. Address The Mayor.

Charlotte, N. C.—City is considering paving South Tryon street from 3d to Morehead streets with bitulithic; plans include laying of water mains; Atlantic Bitulithic Co., Mutual Building, Richmond, Va., contractors for street paving work now in progress, will probably receive contract; estimated cost \$40,000. Address The Mayor.

Chattanooga, Tenn.—West Construction Co., 1001-1007 Market street Chattanooga, is lowest bidder at \$1,953.54 for 471 square yards of asphalt resurfacing in paving district No. 36, east side of Broad street, and 1480 square yards of asphalt resurfacing in district No. 43, west side of Broad street; brick gutters and curbing are included. Board of Public Works, H. F. Van Dusen, chairman, will award contract August 4.

Clinton, Ky.—G. W. Wyren, Vandalla, Ill., will superintend graveling of streets at Clinton.

Clinton, S. C.—McGee Concrete & Construction Co., Greenville, S. C., is completing proposed construction of 1000 square yards cement sidewalks.

Columbus, Miss.—City will pave street crossings with vitrified brick; engineer, Charles L. Wood.

Covington, La.—Charles P. McCann is constructing shell road from residence to Mandeville and Covington turnpike, distance of several miles; Barrow & Smith of Covington are engineers in charge.

Elk City, Okla.—City will pave Main street and Broadway with vitrified brick and sheet asphaltum; bids will be opened August 3; John W. Flournoy, City Clerk. (See "Machinery Wanted.")

Fayetteville, N. C.—City has \$270,000 available for street improvements noted in June (bond issue and assessment); contracts have not been let; class of paving not positively decided; open to propositions. Address J. F. L. Armfield, chairman street committee. (See "Machinery Wanted.")

Hot Springs, Ark.—City will open bids August 15 for various street improvements; F. V. P. Ellsworth, City Engineer. (City recently mentioned as having formed four improvement districts for about 42,000 square yards street paving and 17,000 square yards street-railroad paving.) (See "Machinery Wanted.")

Huntsville, Ala.—W. A. Schrimsher of Huntsville has contract at 90 cents per yard to rebuild four miles of road in Madison county; Frank C. Love, Road Supervisor.

Jacksboro, Tenn.—Campbell county will construct road from Laffollette to Newcomb, Tenn.; bids will be opened August 15; R. B. Baird, Road Commissioner. (See "Machinery Wanted.")

Little Rock, Ark.—City Council will be petitioned to pave about 20,000 yards on Louisiana, 3d, West 4th and other streets; estimated cost \$50,000; E. A. Kingsley, Superintendent Board of Public Works.

Memphis, Tenn.—W. F. Gill, Superintendent of Shelby County Roads, awarded following contract for road work: Fourth District, about 42 miles, to J. S. Robinson and A. H. Ramsey, at \$450 per mile for grading, surfacing and other work of rebuilding, and \$75 per mile for repairs; Eighth District, 40 miles, to C. W. Stewart, at \$450 per mile for building and grading, and \$70 per mile for repairs; Ninth District, 54 miles, J. W. Stark, at \$465 per mile for new work and \$45 per mile for repairs; Eleventh District, 39

miles. James P. Callis, at \$550 per mile for grading, \$75 for repair work, \$37.50 per 1000 feet for lumber used in culverts, 20 to 24 cents per cubic yard for extra dirt work; Twelfth District, Pearson & Sims, at \$530 per mile for grading, \$72.50 for repairing, \$32.50 per 1000 feet for culvert lumber, 18 to 20 cents per cubic yard for excess dirt removed; Thirteenth District, W. A. Gummer, at \$545 per mile for grading, \$75 per mile for repairing, \$37.50 per 1000 feet for lumber and from 18 to 23 cents per cubic yard of dirt ordered removed by Road Commissioners; Eighteenth District, 38 miles, J. Heiskell Weatherford, City Engineer, at \$445 per mile for grading, \$60 for keeping in repair, \$37.50 per 1000 feet for lumber used in culverts and from 18 to 23 cents per cubic yards for extra dirt hauled; First District, about 65 miles, M. L. Thompson, at \$510.50 per mile for grading, \$75 per mile for repairing, \$35 per 1000 feet for lumber used in culvert work, and from 20 to 28 cents for hauling extra dirt; Seventeenth District, 12 miles, H. B. Massey, at \$540 for grading, \$74 for repairing, \$37.50 for lumber and 32 cents for hauling; Nineteenth District, 13 miles, W. B. Myers, at \$440 for grading, \$65 for repairing, \$33.35 for lumber and from 18 to 28 cents for hauling extra dirt; all of Memphis. Mr. Gill will supervise work.

Mobile, Ala.—John B. Turner & Co., St. Louis, Mo., will probably withdraw bid recently mentioned for work on 5th-street paving venture, in which case B. B. Boone, City Attorney, recommends that contract be awarded to Jett Bros. Contracting Co. of Mobile. Board of Public Works, Stewart Brooks, president, has postponed action until July 30.

Muskogee, Okla.—Cleveland Trinidad Paving Co., Cleveland, Ohio, has begun work on street-paving contract amounting to \$150,000, or \$2.03 per square yard; has recently completed contract amounting to \$62,000. Hosmer & Davis of Muskogee have contract for paving 75,000 square feet of sidewalk at nine and three-quarters cents per square foot; City Clerk invites bids until August 3 on brick paving district amounting to \$150,000; L. B. Kinsey, City Engineer. (City noted in May to undertake various street improvements.) (See "Machinery Wanted.")

Paint Rock, Ala.—Jackson county will build road from Paint Rock to Woodville, Ala.; estimated cost \$6000. Address County Commissioners, Scottsboro, Ala.

Paducah, Ky.—M. H. Weikel has contract at \$144.50 for improving Water street; T. J. Sale at \$1235.40 for improving 15th street, and W. L. Yancy at 12½ cents per foot for improving alley between Tennessee and Jones streets and 16th and 18th streets; all of Paducah. Southern Bitulithic Co., Nashville, Tenn., has secured contract for reconstructing Broadway and will soon begin work; bids will be readvertised for improving Farley place. L. A. Washington, City Engineer. (Recently mentioned.)

Palestine, Texas.—City will expend about \$50,000 in street paving. Address The Mayor.

Pensacola, Fla.—Escambia county contemplates expending \$300,000 bond issue for road improvements and construction of three bridges. Address County Commissioners.

Portsmouth, Va.—Contract will be awarded August 1 for excavating and grading about 20,000 cubic yards of roadways and slopes at Forest Lawn Cemetery; Robert Johnston, chairman Board of Control. (See "Machinery Wanted.")

Roanoke, Va.—Street committee recommended that J. Markley be awarded contract at \$7335.50 for repaving Salem avenue and at \$6250 for constructing granolithic sidewalks; R. M. Bibb at \$12,119.34 for paving two blocks of Campbell avenue; Roanoke Concrete Co. at \$525 for brick sidewalks on Stewart avenue; all of Roanoke; W. B. Bates, City Engineer. (City recently mentioned to undertake street improvements.)

San Antonio, Texas.—City has rejected all bids for paving Houston street from Nacogdoches street to Santa Rosa avenue, both on brick and asphalt paving; no action has been taken in regard to advertising for new bids, but it is reported that Mayor Callaghan may consider question of city undertaking the work, in which event vitrified brick will be used; C. C. Gibbs, chairman of committee.

Shawnee, Okla.—A. M. Blodgett, Kansas City, Mo., has not secured contract for 30,690 square yards of brick paving at Shawnee, as previously reported.

Southport, N. C.—City is considering election for voting on \$5000 bond issue for street improvements and purchase of fire engine. Address The Mayor.

SEWER CONSTRUCTION

Annapolis, Md.—City has voted negatively on \$40,000 bond issue, of which \$30,000 was to be expended for sewer and paving at Murray Hill, etc. Address The Mayor. (Recently mentioned.)

Baltimore, Md.—Bids will be opened August 5 by the Board of Awards at office of J. Sewell Thomas, City Register, City Hall, for construction of storm-water drains. Approximate quantities: 250 linear feet 13½-inch by 13½-inch drain; 270 linear feet 36-inch circular drain; 40 linear feet 24-inch circular drain; 24 linear feet 15-inch circular drain; 40 linear feet 15-inch inlet connections; 250 linear feet 8-inch underdrain; 70 cubic yards brick masonry; 720 cubic yards concrete; 1500 cubic yards embankment; 32 linear feet manholes; 2 inlets; J. Barry Mahool, president Board of Awards. (See "Machinery Wanted.")

Basic City, Va.—City will vote July 28 on \$25,000 bond issue of sewer, paving and water-works construction. Address The Mayor.

Burlington, N. C.—City will expend about \$100,000 in construction of sewer and water systems, recently mentioned. Pomona Terra-Cotta Co., Pomona, N. C., has contract to furnish sewer pipe, and Abce & Edwards, Hickory, N. C., for excavating, etc.; Gilbert C. White, Durham, N. C., engineer in charge; A. F. Barrett, chairman sewer and water committee. (See "Water-works.")

Columbia, Miss.—City awarded contracts aggregating \$41,870 for construction of sewer and water-works system; will erect brick building 50x75 feet; Xavier A. Kramer, Magnolia, Miss., engineer in charge. (Mentioned in June.)

Denton, Texas.—City contemplates expending about \$24,000 in construction of sewer system. Address The Mayor.

Louisville, Ky.—Bids will be opened August 11 for construction of Broadway sewer, contract No. 10 of comprehensive system of sewerage. Work consists mainly of building sewer of concrete as follows: 970 feet, 33 inches in diameter; 480 feet, 33 inches in diameter, average depth of cut about 9 feet; approximately 290 cubic yards of concrete. Plans and specifications on file at office of Commissioners, Louisville, and of consulting engineer, Harrison P. Eddy of Metcalf & Eddy, 14 Beacon street, Boston, Mass.; certified check at least 7 per cent. amount of bid; J. F. B. Reed, chief engineer; P. L. Atherton, chairman. (See "Machinery Wanted.")

Louisville, Ky.—Bids will be opened August 21 for construction of Section "D" of southern outfall sewer, contract No. 11, comprehensive system of sewerage. Work consists mainly of building reinforced-concrete sewer as follows: 770 feet concrete, 13 feet 9 inches in diameter; 2763 feet concrete, 13 feet 6 inches in diameter; 1037 feet concrete, 13 feet 3 inches in diameter; 1360 feet concrete, 13 feet in diameter. Principal items in engineer's estimate are approximately as follows: Depth of cut, 26 to 42 feet; concrete masonry, 11,000 cubic yards; reinforced steel, 600,000 pounds; certified check at least 7 per cent. amount of bid; plans and specifications on file at office of Commissioners, Louisville, and of consulting engineer, Harrison P. Eddy of Metcalf & Eddy, 14 Beacon street, Boston, Mass.; J. F. B. Reed, chief engineer; P. L. Atherton, chairman. (See "Machinery Wanted.")

Madisonville, Ky.—City will sell franchise for construction of sewer and water-works system; surveys are being made by George C. Morgan, engineer, Chicago, Ill.; I. N. Vickers, Mayor. (L. B. Fuller, Chicago, Ill., recently incorrectly noted as engineer in charge of survey.)

McAlester, Okla.—City will vote August 4 on issuance of \$156,000 of bonds to construct sewer system. Address The Mayor.

Monterey, Va.—J. S. Gibson of Monterey and Forest Kyle, Staunton, Va., are planning to construct sewer system. (See "Water-works.")

Muskogee, Okla.—City expects to ask bids within three weeks on sanitary sewer laterals amounting to about \$12,000 and also for \$200,000 worth of asphalt; L. B. Kinsey, City Engineer. (See "Machinery Wanted.")

Newton, Miss.—Plans and specifications for sewer system to be constructed in business district are on file in office of W. A. Gilmore, clerk; city will dispose of sewerage by means of septic tank; X. A. Kramer, Magnolia, is engineer; cost \$4500. (Recently mentioned.)

Richlands, Va.—Town is considering construction of sewer system, water-works and electric-light plant; bonds may be issued; C. B. Neel, chairman of committee. (See "Machinery Wanted.")

Taylor, Texas.—School Trustees, Arthur J. McCarty, secretary, invites bids for installa-

tion of system of sanitary sewerage connections in four-story school building.

Vicksburg, Miss.—City will open bids September 7 for constructing system of house sewers, approximating 30 miles 8 to 27-inch pipe sewers, with 400 manholes and 100 flush tanks; Walter G. Kirkpatrick, engineer, Jackson, Miss. (See "Machinery Wanted.")

TELEPHONE SYSTEMS

Fort Smith, Ark.—Pan Telephone Co. is planning construction of new exchange and installation of automatic service.

Leitchfield, Ky.—Mulberry Flat Telephone Co., incorporated by W. W. Taylor, T. H. Rhodes, C. M. Kelly and others.

Lexington, Ky.—Fayette Home Telephone Co. has been granted new franchise, replacing that under which it now operates.

Oklahoma City, Okla.—Banner Telephone Co., incorporated by George I. Myers, Oklahoma City; L. Stinchcomb and J. E. McKinney, Yukon, Okla.

Peek, Okla.—Hackberry Farmers' Telephone Co., incorporated with \$5000 capital stock by D. M. Davis, D. E. Glancy, J. C. Pearce, all of Arnett, Okla., and others.

TEXTILE MILLS

Alexandria, Va.—Silk—Bilas Silk Throwing Co. of Dickson City, Pa., states recent report not correct that it will build mill structure at Alexandria, but will probably fill present building with machinery in the near future; now operating 2000 spindles.

Augusta, Ga.—Cotton.—Frank E. Baldwin, Journal Building, Boston, Mass., contemplates building large cotton mill in Augusta district.

Chattanooga, Tenn.—Hosiery.—The Southern Sockery incorporated with \$5000 capital stock to sell hosiery made by contract, and may establish knitting plant in future; E. E. Hogue, president.

El Reno, Okla.—Cotton.—Canadian Cotton Co., incorporated with \$50,000 capital stock by Frank E. Gillette of El Reno, W. A. Patterson of St. Louis, Mo., and Fred A. Gillette of Hobart, Okla.

Kinston, N. C.—Hosiery.—Orion Knitting Mills increased capital stock from \$10,000 to \$109,000.

Louisville, Ky.—Worsted Yarns.—Commercial Club is interested in proposal to establish worsted-yarn mill.

Petersburg, Va.—Duck, etc.—Virginia Consolidated Milling Co. awarded contract to Chas. E. Manor of Stanleyton, Va., for installation of pair of 35-inch turbine wheels, with head-gate fixtures, governor, etc.; company operates 32,500 spindles and 810 looms.

Raleigh, N. C.—Ginghams.—Caraleigh Mills Co. will install equipment for electrical drive, as stated lately; has not yet purchased the machinery. (See "Machinery Wanted.")

Raleigh, N. C.—Yarns.—Raleigh Cotton Mills will install electrical driving equipment, as lately stated; about 400 horse-power needed; will open bids on August 4. (See "Machinery Wanted.")

Rockwood, Tenn.—Hosiery.—Rockwood Mills will build addition and install machinery to double present capacity of 400 dozen pairs of hose daily.

Shelby, N. C.—Sheetings, etc.—Shelby Cotton Mills will build addition and install 2500 twisting and 6500 producing spindles.

WATER-WORKS

Alta Loma, Texas.—L. H. Coley, Galveston, Texas, submitted lowest bid at \$24,434.42 for installation of air-lift pumping plant with capacity of 5,000,000 gallons at Alta Loma; Mr. Coley also submitted a supplemental bid at \$23,934.43. McHenry & Amandsen of Galveston have contract to construct concrete reservoir, and Brooks-Gordon Construction Co., also of Galveston, at \$3500 for erecting brick building, 50x55 feet, for the plant; Henry Pennington, Houston, Texas, engineer in charge; George B. Stowe of Galveston, architect; A. T. Dickey, City Engineer, Galveston. (Mentioned in June.)

Basic City, Va.—City will vote July 28 on issuance of \$25,000 of bonds for water-works, paving and sewer construction. Address The Mayor.

Burlington, N. C.—City awarded following contracts for construction of water-works and sewer system: Glamorgan Pipe & Foundry Co., Lynchburg, Va., hydrants and valves; United States Cast Iron Pipe & Foundry Co., Chattanooga, Tenn., cast-iron pipe; R. D. Cole Manufacturing Co., Atlanta, Ga., tower and tank; Erie Manufacturing & Supply Co., Erie, Pa., boilers; Pomona Terra-Cotta Co., Pomona, N. C., sewer pipe; Abce

& Edwards, Hickory, N. C., excavating, etc.; total estimated cost \$100,000; Gilbert C. White, Durham, N. C., engineer in charge; A. F. Barrett, chairman sewer and water committee. (Recently mentioned.)

Charlottesville, Va.—City reservoir will be completed within next 30 days; bond issue of \$35,000 recently noted to be voted August 8 is for completion of work; bonds to amount of \$160,000 voted two years since.

Columbia, Miss.—City has awarded contracts for constructing water-works and sewer system, amounting to \$41,870; will erect brick building 50x75 feet; Xavier A. Kramer, Magnolia, Miss., engineer in charge. (Mentioned in June.)

Dallas, Texas.—City has appropriated \$60,000 for extension of water mains, of which \$35,000 will be expended at once. Address The Mayor.

Daytona, Fla.—City will probably vote on issuance of \$50,000 of bonds for water-works construction. Address The Mayor.

East Point, Ga.—East Point Light & Water Co. will erect plants to furnish city with light and water; building 30x30 feet; brick; fireproof; will contain two 500-gallon electric-driven pumps; one electric-driven compressor; cost of building \$2500; cost of pumps and motors \$5000; settling machinery \$1000; compressor and motor \$3000; daily capacity of water plant 183,000 gallons; E. H. Davis, Griffin, Ga., engineer and architect; S. M. McCowell, City Clerk. (City mentioned in June to vote on issuance of \$50,000 of bonds for water-works.)

Eudora, Ark.—Eudora Gin, Water, Light & Power Co., incorporated with \$8000 capital stock; M. Schwartz, president; A. E. Allen, vice president; H. M. Bailey, secretary; A. Flebleman, treasurer.

Madisonville, Ky.—City is having surveys made by George C. Morgan, engineer, Chicago, Ill., for construction of water-works and sewer system; franchise will be sold; I. N. Vickers, Mayor. (L. B. Fuller, Chicago, Ill., recently incorrectly reported as civil engineer making survey.)

Monterey, Va.—J. S. Gibson of Monterey and Forest Kyle, Staunton, Va., have purchased spring and contemplate laying four-inch pipe to convey water to Monterey, distance of about 5000 feet; fall about 500 feet; plan also includes installation of sewerage system.

Montgomery, Ala.—Cloverdale Homes & Improvement Corporation, O. O. Nelson, manager, contemplates laying 3000 feet of 8-inch water pipe and 7000 feet of 6-inch water pipe, furnishing Cloverdale with water.

Ocella, Ga.—City will vote August 3 on issuance of \$7999 water-works bonds. Address The Mayor.

Richlands, Va.—Town Council has appointed committee, with C. B. Neel chairman, to arrange for construction of water-works, electric-light plant and sewer system; committee may decide on installation of gravity water-supply system; bond issue is proposed. (See "Machinery Wanted.")

Tengue, Texas.—City awarded contract to J. W. Maxey & Co., Houston, Texas, to construct water-works system; \$50,000 of bonds recently reported voted.

WOODWORKING PLANTS

Charleston, S. C.—Sashes and Doors.—Percival Sash & Door Co., incorporated with \$10,000 capital stock; E. W. Percival, Charleston, president; E. W. Percival, Jr., Fayetteville, N. C., secretary and treasurer.

Gadsden, Ala.—Cooperage.—Attalla Cooperage Co. of Attalla, Ala., contemplates establishing mill at Gadsden.

Jackson, Tenn.—Boxes and Staves.—Harland Box & Stave Factory, Trenton, Tenn., will establish plant at Jackson.

Keyser, W. Va.—Baskets, Crates and Laths.—C. L. Wiseman plans formation of company to establish factory for fruit and berry crates and baskets and laths; equipment of machinery not yet purchased. (See "Machinery Wanted.")

Montgomery, Ala.—Handles, etc.—Minchener Spoke & Handle Manufacturing Co., Troy, Ala., will establish plant in Montgomery for manufacturing handles, spokes and picker sticks.

Paducah, Ky.—Ties.—Bartee Tie Co., incorporated with \$50,000 capital stock by J. B. Bartee, J. T. Nichols and George McCandless.

St. Louis, Mo.—Barrels, etc.—St. Louis Cooper, Carriage & Woodwork Co. will be established in St. Louis as branch of J. A. & D. P. Cooper Company, Struthers, Ohio; has purchased four acres of ground and will erect factory building. Ralph M. Cooper, Struthers, Ohio, will be manager; will invest \$70,000.

BURNED

Ballinger, Texas.—Home Steam Laundry, owned by W. A. Talley; loss \$1000.

Bonham, Texas.—T. B. Williams' residence; loss \$5000.

Center, Texas.—Risinger & McCauley's lumber mill.

Christian County, Ky.—Illinois Central Railway Co.'s stations at Gracey, Otter Pond and Cerculean Springs, Christian county, Ky.; A. S. Bandwin, chief engineer, Chicago, Ill.

Concord, N. C.—Kerr Bleaching and Finishing Works damaged by fire; J. M. Odell, president.

Crab Orchard, Ky.—King Hotel; loss about \$10,000.

Cranberry, N. C.—Nelson Lumber Co.'s mill near Cranberry; main offices, Johnson City, Tenn.

Foss, Okla.—First National Bank.

Gallatin, Tenn.—J. B. Malone's stock barn.

Glard, Ala.—Chattahoochee Chemical & Mining Co.'s plant; loss about \$10,000.

Gracemont, Okla.—Gracemont Hotel, W. J. Harbour, proprietor; loss on building about \$6000. Finley Bros. Mercantile Co.'s store; loss \$6000.

Hazlehurst, Miss.—Allen & Window's sawmill and ginney.

Kansas City, Mo.—Schwarzschild & Sulzberger's cooperage; loss \$50,000.

Lagrange, Ga.—Southern Female College; loss about \$40,000; M. W. Hatton, president; L. H. Wallace's residence.

Lakeland, Fla.—Lakeland Lumber Co.'s saw, planing and lath mill.

Rock Hill, S. C.—Pride Ratteree's building; loss about \$6000.

Savannah, Ga.—A. S. Bacon & Sons' offices; M. S. & D. A. Byck's printing plant; buildings owned by Union Society.

Shelbyville, Tenn.—Joseph Pressgood's barn and stable.

Texarkana, Ark.—Kansas City Southern Railway's roundhouse and shops; loss about \$20,000; A. F. Rust, resident engineer, Kansas City, Mo.

Vade Mecum, N. C.—Vade Mecum Springs Hotel, Dr. H. P. McKnight, Southern Pines, N. C., manager.

BUILDING NOTES
APARTMENT-HOUSES

Baltimore, Md.—A. C. Doyle of Gilbert & Doyle, 301 St. Paul street, has had plans prepared by John R. Forsythe, 232 St. Paul street, Baltimore, for four-story brick apartment-house to cost \$10,000 on Chestnut avenue, Walbrook; site 16x55 feet. Mr. Doyle is builder. (Recently mentioned.)

Mobile, Ala.—A. Streb is having plans prepared by Stone Bros., New Orleans, La., for store and apartment building; two stories; cost \$6000.

Mobile, Ala.—Duggan & Taylor, agents for Louis Lowenstein, have had plans prepared by Stone Bros., New Orleans, La., for apartment-house; two stories; brick; cut stone trimmings; tile roof; four apartments of five rooms each; electric lighting; cost about \$20,000; construction has begun.

Roanoke, Va.—J. F. Barbour & Co. of Roanoke have contract to erect "The Gainsboro" apartment-house; 16 apartments; ordinary construction; hot-water heating; gas ranges; cost \$40,000; plans by H. H. Huggins, Terry Building, Roanoke. (Previously mentioned. See "Machinery Wanted.")

BANK AND OFFICE BUILDINGS

Arabi, La.—Crescent City Stock Yard & Slaughterhouse Co., recently noted (under "Miscellaneous Structures") to erect buildings, is constructing commercial and office building 100x40 feet; fireproof; steam heat; electric lighting; cost \$4000; plans by DeBussy, Churchill & Labouisse Company, Ltd., 817 Hibernia Bank Building, New Orleans, La.; work being done by company.

Birmingham, Ala.—Chamber of Commerce Construction Co., recently reported incorporated, has elected John L. Kaul, president; F. M. Jackson, vice-president; J. P. Stiles, secretary; John H. Barr, treasurer; will erect seven-story reinforced concrete office building, recently described; plans by Warren & Welton, Title Guarantee Building, Birmingham.

Birmingham, Ala.—National City Bank will expend \$350,000 to erect fireproof bank and office building 50x125 feet, recently described; architect, date of opening bids for erection, etc., not decided. Address Ben T. Head, vice-president Citizens' Savings Bank, 243 First avenue.

Elberton, Ga.—First National Bank, J. F. Holden, Crawfordville, Ga., president, will erect bank building.

Jacksonville, Fla.—People's Bank & Trust Co., Herbert B. Race, president, will remodel front of bank building, and awarded contract to Franz Safe & Lock Co. of Jacksonville for steel vaults, etc.; main vault will contain safety-deposit boxes; will also install burglar-proof money chest.

Jennings, La.—Houssiere-Latreille Oil Co. awarded contract to E. E. Carroll, Shreveport, La., to erect opera, office and lodge building; I. C. Carter, Rigmalden Building, Lake Charles, La., prepared plans. (Noted in June. See "Theaters.")

Knoxville, Tenn.—City National Bank, W. S. Shields, president, awarded contract to David Getaz, Son Company of Knoxville to erect bank building; one story and basement; 45 feet high, 145 feet long; front will be of white Vermont marble, excepting base, which will be of dark gray North Carolina granite, polished; fireproof; brick, terra-cotta, tile, ornamental iron and steel work; floors and roof to be supported by terra-cotta arches; interior lined with hollow brick; Ionic columns at either side of entrance; three vaults in rear of banking-room and storage vault in basement; lowering platform for safe-deposit vault; mezzanine floor to be 23x37 feet; art glass skylight, 12x63 feet; electric and gas lighting; steam heat; cost when completed about \$65,000; contract for interior marble and bank furnishings not awarded; plans by Mowbray & Ufinger, 92 Liberty street, New York. (Recently mentioned.)

Salisbury, N. C.—Mr. Grubb is having plans prepared by Rose & Weston, Greensboro, N. C., for store, office and lodge building; fireproof; eight stories; stores on first floor; 120 offices from second to seventh floors, inclusive; lodgerooms on eighth floor; roof garden will be arranged with dance hall, which can be used for theater.

CHURCHES

Baltimore, Md.—St. James Protestant Episcopal Church awarded contract to E. W. Gorman, Irvington (suburb of Baltimore), to erect edifice; one story, 41x18 feet; ordinary construction; steam heat; electric lighting; cost about \$15,000; F. E. Beall, 213 St. Paul street, Baltimore, prepared plans.

Birmingham, Ala.—Baptist congregation will erect edifice at Fountain Heights; plans by La Belle-Kriss Company, Title Guarantee Building, Birmingham; brick and stone building; 90x110 feet; steam heat; electric lighting; cost \$30,000; bids to be opened about August 15; J. D. Ray, pastor.

Charleston, W. Va.—State Street M. E. Church will erect brick edifice at cost of about \$80,000. Address The Pastor, State Street M. E. Church.

Chattanooga, Tenn.—Highland Park M. E. Church South, Rev. E. E. Wiley, pastor, Beech street and Union avenue, awarded contract at \$30,000 to T. A. Chambers & Sons, 813 Henderson avenue, Chattanooga, to partially complete new church building; St. Louis buff pressed brick with Bedford stone columns and stone and terra-cotta trimmings; dome covered with copper; metal tile roof; hot-air heating plant and plumbing not included in contract; Bearden & Foreman, architects, Chamberlain Building, Chattanooga. (Mentioned in June.)

Ensley, Ala.—M. E. Church, South, will soon award contract for erection of edifice; brick or stone; slate roof; 80x125 feet; steam heat; cost about \$35,000; plans by R. H. Hunt, James Building, Chattanooga, Tenn. (Noted in May.)

Laurel, Miss.—First Baptist Church, Rev. L. G. Gates, pastor, contemplates, it is reported, erecting brick church building and remodeling present edifice as sanitarium.

Napoleonville, La.—Catholic congregation, Rev. L. H. L'Anglais, pastor, it is reported, awarded contract to C. D. Stuart, Baton Rouge, La., to erect edifice; hollow concrete block construction; 64x130 feet; plans by Dibold & Owen, New Orleans, La. (Previously mentioned.)

Rice, Texas.—Haynie Memorial M. E. Church, South, awarded contract to E. S. Rose, Waxahachie, Texas, at \$16,000 for erection of edifice, recently mentioned; plans by J. E. Flander, Dallas, Texas.

Rogers, Ark.—M. E. Church, South, is planning to erect edifice at cost of about \$10,000. Address The Pastor, M. E. Church, South.

San Antonio, Texas.—First Presbyterian Church will erect Sunday-school and church building; contract will be let August 15; plans and specifications at office of Atlee B. Ayres, architect, San Antonio.

Stamford, Texas.—First Baptist Church, F. S. Grover, pastor, will award contract August 19 for erection of brick stone-trimmed church building; plans on file at Stamford, office of Hughes-O'Rourke Construction Co., Dallas, Texas, and Scott & Lane, architects, Waco, Texas. Bids will be received by R. L. Penick, chairman building committee. (Recently mentioned.)

St. Louis, Mo.—Kingshighway Presbyterian Church awarded contract to Murch Bros. of St. Louis for erection of addition to edifice; seating capacity 1000.

Wheeling, W. Va.—First Christian congregation contemplates erecting church building and parsonage, expending about \$45,000; Remick P. Truxell, chairman of committee.

COURTHOUSES

Henderson, N. C.—D. J. Phipps, Newport News, Va., is lowest bidder at \$14,990 for erection of addition and alterations to Vance county courthouse according to revised plans by Frank P. Milburn & Co., Home Life Building, Washington, D. C. (Recently mentioned.)

DWELLINGS

Little Rock, Ark.—W. B. Ferguson has had plans prepared by J. M. Whitehead, Little Rock, for four dwellings; aggregate cost, \$12,000.

Mayfield, Md.—John J. Dobler, 436 Harford road, Baltimore, Md., has had plans prepared by Clyde N. Friz, 11 East Pleasant street, Baltimore, Md., for residence in Mayfield; contractors estimating are Willard E. Harn, 2700 Huntingdon avenue; Frederick Decker & Son, 1211 East Biddle street, and William H. Porter & Son, 505 Forrest street, all of Baltimore, Md.

Nashville, Tenn.—Robert Cheek will erect two-story veneered residence; cost \$5000.

New Orleans, La.—George McC. Derby, 1015 Carrollton avenue, has not selected architect and does not contemplate making plans before winter for residence recently mentioned; probable cost \$10,000.

Ocala, Fla.—M. J. Roess has received plans and specifications for erection of proposed dwelling; to cost \$7500; he will let contract for carpenter work, but will buy and furnish all materials himself. (See "Machinery Wanted.")

Richmond, Va.—M. L. Hofhelmer awarded contract to Geo. D. Pledy, Richmond, for erection of residence recently mentioned; colonial; hot-water heating; electric lighting; plans by Wm. C. West, Richmond.

Roanoke, Va.—J. R. Ruffin awarded contract to J. F. Barbour & Co. of Roanoke for erection of residence; 48x58 feet; two stories and basement; brick; ordinary construction; hot-water heating; electric lighting; cost \$13,000; architect, H. H. Huggins of Roanoke.

Savannah, Ga.—C. H. Konemann, 17 Bay street east, will expend \$6000 for dwelling reported last week; building to be two stories high with eight rooms; W. O. Hawley, Savannah, contractor.

Wheeling, W. Va.—First Christian Church contemplates erecting parsonage; Remick P. Truxell, chairman of committee. (See "Churches.")

GOVERNMENT AND STATE BUILDINGS

Bluefield, W. Va.—Postoffice and Court-house,—D. J. Phipps, Newport News, Va., has contract at \$79,917 to erect U. S. post-office and courthouse at Bluefield. (Previously mentioned.)

Memphis, Tenn.—Fair Building.—Shaw & Pfeil of Memphis will prepare plans and specifications for dairy building, with concrete floor space, 30x50 feet, on Tri-State Fair grounds.

Moundsville, W. Va.—Penitentiary.—Directors West Virginia Penitentiary have had plans prepared by Glessey & Faris, Wheeling, W. Va., for porch to be erected at penitentiary, contract for which was recently reported awarded to W. H. Batson & Co., Moundsville; porch will be 18x46 feet; one story; stone; red-tile floor; four octagon columns with carved caps; three front and two end arches; cost \$4300.

Washington, D. C.—Assembly Hall.—Pavarrini & Wynne, 322 Munsey Building, Washington, have contract to erect assembly hall at Government Hospital for Insane; granite; stone; brick; reinforced concrete; ornamental terra-cotta; iron and steel work; sheet-metal work; tile roof; hot-air heating system; plumbing; electric wiring; interior marble; slate and tile; cost about \$125,000; Sunderland Bros., Ouray Building, Washington, architects. (Recently noted.)

HOTELS

Atlanta, Ga.—Atlanta Brewing & Ice Co. will expend \$25,000 in erection of hotel; contract recently noted awarded to W. H. George, 709 Prudential Building, Atlanta; plans by Morgan & Dillon, Prudential Building; three stories and basement; 50x112 feet; gravel roof; steam heat; elevator for freight and passengers; electric lighting.

Blacksburg, Va.—J. L. Eakin and associates will remodel hotel at cost of \$75,000; plans by H. H. Huggins, Terry Building, Roanoke, Va.

Burkeville, Va.—Mr. Wood, owner (address care of H. H. Huggins), awarded contract to W. N. Gray (address care of H. H. Huggins) for erection of 30-room hotel; cost \$16,000; plans by H. H. Huggins, Terry Building, Roanoke, Va.

Galveston, Texas.—Dr. James M. Head is having plans prepared by Harvey L. Page, Moore Building, San Antonio, Texas, for hotel on Galveston beach; five stories; 300 rooms; concrete, reinforced with steel; monolithic construction; reported cost \$500,000.

Greenville, S. C.—Greenville Hotel Co. awarded contract to J. F. Grandy & Son for erection of hotel, and to Barr Hardware Co. for heating and plumbing; both of Greenville; building will be five stories, about 100x150 feet; colonial design; red brick; copper cornices; terra-cotta trimmings; about 89 bedrooms, about half of which will have bath, telephone, etc.; elevator; steam heat; electric lighting; plans by Shand & LaFaye, Columbia, S. C. (Noted in June.)

Hobart, Okla.—R. A. Harding, owner of Nash Hotel, will expend about \$6000 in erection of annex; 30x64 feet; Coffeetown brick; 18 bedrooms and two bathrooms; vulcanite fire doors; asphalt roof; fireproof; electric lights; cost \$6500; L. E. Sparks, Box 192, Hobart, is architect and contractor. (Recently mentioned.)

Jacksonville, Fla.—Mrs. E. J. Baldwin awarded contract to W. T. Hadlow Company, Jacksonville, for erection of apartment hotel; three stories, 40x92 feet; brick with stone trimmings; 35 rooms and 12 bathrooms; steam and gas heat; cost over \$25,000; plans by H. J. Klutho, Jacksonville.

Lawton, Okla.—Henry Schafer, El Reno, Okla., has purchased and will complete half-constructed hotel at Lawton.

Little Rock, Ark.—H. F. Auten and associates will, it is reported, expend about \$75,000 in improvements to Capital Hotel.

Little Rock, Ark.—Terminal Hotel Co., recently reported organized with Emmet Morris secretary, has had plans prepared by C. L. Thompson of Little Rock for hotel 68x110 feet; three stories; brick; ordinary construction; electric lighting; first floor to be used for mercantile purposes, and second and third floors for hotel; cost \$50,000; bids will be opened in August.

Norfolk, Va.—Colonial Corporation (owner of Colonial Theater and Princess Hotel) contemplates, it is reported, erecting six-story addition to Princess Hotel.

Ola, Ark.—Ola Hotel Co. incorporated with \$15,000 capital stock by O. J. Harkey, J. A. Wilson, H. V. George, W. D. Jacoway and others.

Quincy, Fla.—Quincy Hotel Co. will erect 50-room hotel costing about \$40,000.

Quanah, Texas.—M. E. Kerrager has, it is reported, organized stock company to erect summer hotel costing about \$40,000.

Wadley, Ga.—Callaway Development Co. is name of company which awarded contract to Pike Bros. Lumber Co. of Lagrange for erection of hotel recently mentioned. Structure will be 90x110 feet; five stories; 30 rooms; ordinary construction; hotel on second floor; grates and fireplaces; lighting will probably be electric, not included in contract; cost about \$20,000.

MISCELLANEOUS STRUCTURES

Accomac, Va.—Jail.—Board of Supervisors of Accomac county will open bids August 20 for erection of county jail; certified check \$500; plans and specifications on file at office of Frank P. Milburn & Co., architect, Home Life Building, Washington, D. C., or at office of county clerk; W. L. Nock, chairman Board of Supervisors. (Mentioned in June.)

Atlanta, Ga.—Industrial Building and Home.—Georgia Colored Industrial and Orphan's Home contemplates erection of industrial building and chapel.

Baltimore, Md.—Restaurant.—Horn & Horn, 383-385 East Fayette street, awarded contract to Henry Smith & Sons Company, 116-120 South Register street, Baltimore, for erection of addition to present structure, to extend to Baltimore street; stone, brick, terra-cotta, steel and concrete; 26x148 feet; three

stories; concrete and granite foundation; plans by Otto G. Simonson, American Building, Baltimore.

Baltimore, Md.—Signal Tower.—Baltimore & Ohio Railroad, D. D. Carothers, chief engineer, Baltimore & Ohio Building, Baltimore, will erect signal tower at Riverside yards; brick; slate roof; contractors estimating are Henry S. Ripel, 7 Clay street; J. J. Walsh & Son, 1525 Maryland avenue; Edward Brady & Son, 1109 Cathedral street, and Frederick Decker & Son, 1209 East Biddle street, all of Baltimore.

Bristol, Tenn.—Store.—J. M. Barker, Interstate Building, awarded contract to L. Lowe, Bristol, for erection of proposed store building 50x165 feet; two stories; granite construction; electric lighting; cost \$12,000; plans by S. W. Shepard, Bristol. (See "Machinery Wanted.")

Clinton, S. C.—Store.—R. Z. Wright awarded contract to McGee Concrete & Construction Co., Greenville, S. C., for erection of two-story double storeroom; cost \$6000. (See "Machinery Wanted.")

Dawson, Ga.—Mercantile Building.—W. B. Chatham will erect building as reported last week; one story; brick and metal; 30x30 feet; ordinary construction; electric lighting; open grates or stoves for heating; plans by Mr. Chatham; contractors, Dunbar & Bartlett of Dawson; building to cost \$4000.

Goldsboro, N. C.—North Carolina Odd Fellows' Orphanage Trustees have had plans prepared by Charles McMillen, Wilmington, N. C., for Nathaniel Jacob Memorial Building; three stories; cost \$22,000.

Jacksonville, Fla.—Hospital.—St. Luke's Hospital Association will probably erect hospital building, to cost approximately \$100,000.

Kissimmee, Fla.—Lodge Building.—Masons and Knights of Pythias contemplate erecting three-story brick building; Arthur E. Winegan, chairman of building committee.

Knoxville, Tenn.—Asylum.—Knox county awarded contract to A. J. Cloyd, Knoxville, at \$11,776 for erection of Knox County Poor Asylum at Maloneyville (suburb), and to M. F. Bourke Company, Knoxville, at \$1800 for plumbing. (Recently mentioned.)

Knoxville, Tenn.—Masonic Temple.—Masonic Temple Association incorporated with \$150,000 capital stock by George P. Chandler, W. P. Richards, H. Krels and others to erect Masonic temple.

Laurel, Miss.—Sanitarium.—First Baptist Church, Rev. L. G. Gates, pastor, contemplates, it is reported, remodeling church building as sanitarium.

Lexington, Ky.—Knights of Pythias, W. C. G. Hobbs, secretary to directors, will expend \$20,000 to build orphanage lately noted; ordinary brick construction; low-pressure steam heat; probably natural gas lighting; to open bids about October 1.

McMinnville, Tenn.—Business Building.—A. M. Jones will build business structure.

Memphis, Tenn.—Y. M. C. A. Building.—Young Men's Christian Association awarded contract to Olsen & Leach, Memphis, at \$160,000 for erection of building; previously mentioned; plans by J. Galsford, Memphis.

Mt. Pleasant, Tenn.—Store Buildings.—J. T. Jenkins, G. W. Killebrew and W. H. Kittrell will erect block of store buildings, to cost about \$25,000.

Norfolk, Va.—Business Building.—Randolph-Macon System has had plans prepared by Neff & Thompson, Norfolk, for business building; three stories; stone and brick; cost \$10,000; first floor will contain two stores; upper floors offices.

Owings Mills, Md.—Contractors estimating on stone dormitory recently reported to be erected by Maryland Asylum and Training School for Feeble-Minded at Owings Mills include Arthur F. West, 217 South Gilmor street; Fred Decker & Son, 1209 East Biddle street; Willard E. Harn, 2700 Huntingdon avenue; John Cowan, 106 West Madison street; B. F. Bennett Engineering Co., 123 South Howard street; D. M. Andrews, Vickers Building, all of Baltimore, and Daniel Harding, Towson, Md.; plans by Ellicott & Emmart, Union Trust Building, Baltimore.

Portsmouth, Va.—Business Block.—W. S. Langhorne and W. L. Williams will erect two-and-a-half-story business block.

Richmond, Va.—Armory.—A. C. Bedford of Richmond has contract at \$18,000 to improve the Howitzers' Armory; swimming-pool and shower baths will be provided; William M. Myers is Captain.

Richmond, Va.—Hospital.—Geo. Ben. Johnston and Murah Willis will build hospital, as reported last week; four stories, 40x106 feet; ordinary brick construction; steam heat; electric and gas lighting; electric elevators; architects, Fuller & Pitcher, Albany,

N. Y.; contractor, N. E. Aucarrow, Richmond; completed building to cost \$60,000.

Rome, Ga.—Sanitarium.—McCall Sanitarium will erect addition; pressed brick; two stories; cost \$7000.

Warrenton, Ga.—Store Building.—F. L. Howell will erect store building; concrete; 40x45 feet; 20-foot walls. (See "Machinery Wanted.")

Winston-Salem, N. C.—Store Buildings.—H. G. Chatham, Elkin, N. C., to erect two store buildings; three stories; brick; cost between \$10,000 and \$12,000; first floors to be used for stores; upper floors, offices.

MUNICIPAL BUILDINGS

Annapolis, Md.—Engine-house, etc.—City has voted negatively on \$40,000 bond issue, \$30,000 of which was to be expended for erection of engine-house for Rescue Hose Co., paving and sewerage at Murray Hill, etc., and \$10,000 for improvement of City Assembly-Rooms. Address The Mayor. (Recently mentioned.)

Baltimore, Md.—Jail.—John Waters, 23 East Center street, Baltimore, at \$164,058, is lowest bidder for improvements at city jail, including building two terminal wings to main building with steel cells and addition to hospital department and main building; plans by Theodore W. Pietsch, American Building, Baltimore. (Recently mentioned.)

Bristol, Va.—City Hall.—J. R. McCrary & Son of Bristol are lowest bidders at \$54,638.50 for erection of city hall (recently mentioned) under specifications, and Birches, Waldrep & Co., Knoxville, Tenn., at \$55,500 for concrete fireproof building; Stone Bros., New Orleans, La., architects; John H. Gose, City Clerk.

Chattanooga, Tenn.—Fire Hall.—Adams & Alsop, Chamberlain Building, Chattanooga, will remodel plans for remodeling No. 3 Fire Hall so as to reduce expenditure to about \$5000.

Fort Smith, Ark.—Fire Station.—Zimmerman & Co. of Fort Smith have contract at \$494 for erection of fire station; exclusive of plumbing.

Kansas City, Mo.—Zoo.—Park Board and Kansas City Zoological Society are having plans prepared by Saylor & Seddon of Kansas City for zoological garden in Swope Park; site of 60 acres; eastern 10 acres will be enclosed with iron fence 14 feet high; main group of eight buildings will be 1200 feet long; Italian renaissance style of architecture; native stone; terra-cotta cornices; cut-stone base; tile roofs; fireproof, with steel columns and roof trusses and reinforced concrete floors; will be equipped with complete system of heating, ventilating and drainage; carnivora field will be 120 feet wide and 300 feet long, with cages to care for 64 lions, tigers, etc.; entrance to garden formed by 10 columns of native stone, each 4½ feet square, with cut-stone trimmings; columns will form semi-circle, through center of which will run main boulevard 60 feet wide; ornamental wrought-iron chandeliers for electric lights at entrance; 50-foot drives branch from main boulevard; footpaths 20 feet wide; power-house, keeper's dwelling and three of main buildings will be completed within first year; expenditure, about \$500,000.

McAlester, Okla.—Jail.—City will vote August 4 on \$7000 bond issue for city jail. Address The Mayor.

Ocella, Ga.—City Hall.—City will vote August 3 on issuance of \$8000 City Hall bonds. Address The Mayor.

Pensacola, Fla.—Jail.—City will receive bids until August 5 for paving, curbing and building brick wall around city jail; work will consist of about 875 square feet concrete sidewalks; 700 square feet tile walk to be relaid; 200 linear feet concrete curbing; 137 linear feet brick wall; L. G. Ayward, clerk Board of Public Works; L. Earle Thornton, City Engineer. (See "Machinery Wanted.")

Woodlawn, Station Birmingham, Ala.—City Hall, etc.—City had plans prepared by R. E. Posey, Birmingham, for city hall, jail and fire-department building mentioned in April; brick building, 65x110 feet; terra-cotta; copper cornice; steam heat; electric lighting; cost \$30,000.

RAILWAY STATIONS

Waxahachie, Texas.—Missouri, Kansas & Texas Railway, S. B. Fisher, consulting engineer, St. Louis, Mo., will, it is reported, build depot at Waxahachie.

SCHOOLS

Alexandria, Va.—Alexandria School Board awarded contract to George Leigh & Bro., Louisiana, Va., for erection of school recently

noted; two-story building; 129x66 feet; halls and stairways fireproof; brick walls; concrete and mill construction; heating and ventilating system; architect, Charles M. Robinson, 10th and Main streets, Richmond, Va. (See "Machinery Wanted.")

Attalla, Ala.—City has voted \$15,000 of bonds for erection of high-school building. Address The Mayor. (Recently mentioned.)

Baltimore, Md.—Baltimore Medical College awarded contract to Monmonier & Sorrell, 308 Laurens street, Baltimore, for erection of college building on North Howard street; four stories; brick, terra-cotta and stone; 65x40 feet; estimated cost \$25,000; plans by J. E. Lavery, 11 East Pleasant street, Baltimore. (Recently mentioned.)

Baton Rouge, La.—Louisiana State University will open bids August 10 for completion of chemical laboratory; plans and specifications on file at office of Favort & Llvaudais, architects, 339 Gravier street, New Orleans, La.

Bessemer, Ala.—Bids will be opened August 10 for erection of Franklin County High School; plans and specifications on file at office of J. S. Irvin, Russellville; M. Quinn, secretary building committee.

Birmingham, Ala.—Howard College is having plans prepared by R. H. Hunt, Chattanooga, Tenn., for erection of college building.

Chase City, Va.—School District is having plans prepared by H. H. Huggins, Terry Building, Roanoke, Va., for school building to contain eight rooms and assembly hall; cost \$12,000.

Crawfordville, Ga.—Bids will be opened August 10 for erection of school building; certified check for \$500; plans and specifications on file at office of Hawes Cloud, Mayor. (Recently mentioned.)

Dallas, Texas.—School building recently noted will be erected at cost of about \$25,000; eight rooms; mill construction; direct-indirect steam heat; plans by William F. Nicol, Dallas; T. G. Terry, secretary Board of Education.

El Reno, Okla.—Board of Education awarded contract to A. C. Krepke, El Reno, for erection of two proposed school buildings; brick and stone; fireproof.

Eustis, Fla.—Presbyterian College of Florida, M. L. Stevens, president, contemplates erection of college building.

Florence, Ala.—Florence University for Women will be name of Baptist University building recently noted to be remodeled at cost of \$7000; has been taken over by Southern Female College, Lagrange, Ga.; M. W. Hutton, president of both colleges; contract for general repairs awarded to H. B. Austin, Florence; heating plant to be repaired by Moncrief Furnace Co., Atlanta, Ga.; electric and gas lighting to be contracted.

Fort Worth, Texas.—Bids will be opened August 6 for erection of school building; two stories and basement; brick and concrete; certified check \$500; plans and specifications on file at office of M. L. Waller, architect, Flatiron Building, Fort Worth. (Recently mentioned.)

Greenville, S. C.—McGee Concrete & Construction Co., Greenville, has been awarded contract for proposed addition of 12 rooms to dormitories at Furman University and other improvements about campus; cost \$9000. (See "Machinery Wanted.")

Hagerstown, Md.—Board of School Commissioners of Washington county will open bids August 4 for erection of school building; two stories; eight rooms; John P. Fockler, secretary. (Mentioned in June.)

Huntsville, Ala.—Huntsville Training School awarded contract to A. M. Booth of Huntsville for erection of building 42x78 feet; two stories; frame, with shingle roof; furnace heat; electric lights; building to cost \$7000; architect, E. L. Love, Anniston.

Jacksonville, Ala.—City will expend \$35,000 to build State Normal School reported last week; Charles W. Carleton, Anniston, Ala., architect in charge; C. J. Houser, also of Anniston, contractor; building to be three stories high, of brick; ordinary construction; mechanical heating and ventilating system; electric-light fixtures; S. R. Wilkerson, Mayor.

LaGrange, Ga.—Southern Female College, M. W. Hutton, president, will rebuild college building reported destroyed by fire.

Langston, Okla.—Colored Agricultural and Normal Institute building (State institution) recently noted to be erected will be main building in group of six; strictly fireproof; heated by steam; electric lighting; cost \$55,000; plans and specifications received until August 7 by John L. Mitch, clerk, Board of Regents, Guthrie, Okla.

Lexington, Ky.—C. E. Richards, Columbus, Ohio, is conferring with board of curators, Transylvania University, relative to plans

and specifications for equipment of new science hall now being completed; \$50,000 is available, of which \$32,000 has been expended. Mr. Richards is registered at Phoenix Hotel, Lexington.

Lexington, Ky.—Building committee awarded contract to Coombs Lumber Co., Lexington, for erection of proposed civil engineering and physics building at State University; three stories and basement; 80x128 feet; pressed brick, with Bedford stone trimmings; foundation of limestone; brick corridors; electricity and gas; plans by H. L. Rowe & Co., Lexington.

Little Rock, Ark.—College of Physicians and Surgeons has had plans prepared by Gibbs & Sanders, Little Rock, for improving and remodeling college building; improvements to include erection of amphitheater in rear of west wing; new portico; lecture and operating-rooms will be added; tiled floors and wainscoting; hot-water heat.

Moulton, Ala.—City awarded contract to S. C. Lee, New Decatur, Ala., for erection of brick high-school building; cost \$10,000; Mr. Lee will make his own brick.

Natchez, Miss.—City will receive architects' plans in competition until August 20 for Carpenter Memorial School building; cost not to exceed \$35,000, including light, heating and plumbing. Address The Mayor.

Ninety-Six, S. C.—City has voted \$12,000 of bonds for erection of school building. Address The Mayor. (Mentioned in May.)

Odenville, Ala.—St. Clair county awarded contract to Bearden Bros. & King, 912 South 6th street, Woodlawn, Ala., for erection of school; mill construction; two stories above basement; cost \$10,000; architect, Frank Lockwood, Montgomery, Ala.

Pontotoc, Miss.—City has engaged R. H. Hunt of Chattanooga, Tenn., as architect for building, for which \$25,000 bonds were reported voted last month; structure to be of brick; two stories; galvanized-iron shingle roof; steam heat; W. E. Whiteside, Mayor.

Radford, Va.—School Board, E. F. Gill, clerk, will award contracts for two schools lately noted to open bids August 15; building 60x70 feet; of brick, stone and cement; two buildings; one east and one west ward; to cost \$15,000 each; ordinary fireproof construction; hot-air heating.

Richmond, Ky.—Eastern Kentucky State Normal School has plans prepared by Weber Bros., Covington, Ky., for dormitory, addition to present dormitory and educational building, with auditorium attached, and by Anderson & Frankel, Lexington, Ky., for power, heat and light plant and manual-training building; \$150,000 appropriated by General Assembly; bids will be received for construction work.

Ryan, Okla.—School District No. 1 will erect school building recently noted at cost of \$27,000 to \$30,000; 98x108 feet; 12 rooms; two stories and basement; brick; steam heat; possibly gas lighting; plans by M. L. Waller, Fort Worth, Texas; bids to be opened July 29; contract to be let entire.

St. Augustine, Fla.—City is having plans prepared for proposed school building; 21 classrooms each, with seating capacity of 40; assembly-room seating capacity of 150; steam heat; cost between \$40,000 and \$50,000. Address The Mayor.

Stillwater, Okla.—Board of Education awarded contract to Josh Brock, Stillwater, at \$949, for erection of proposed school building.

Tampa, Fla.—City has voted \$15,000 of bonds for erection of brick school building; 98x205 feet. Address The Mayor.

Thackerville, Okla.—Bids will be opened August 5 for erection of six-room and auditorium brick school building; certified check for \$250; plans and specifications on file at office of Dr. W. J. Gray, Thackerville, or of Sparger & Peters, architects, Bonham, Texas.

Tulsa, Okla.—City will vote August 25 on \$25,000 bond issue for erection and improvements of school buildings. Address The Mayor. (Mentioned in June.)

Union Point, Ga.—City has voted \$10,000 of bonds for erection of school building. Address The Mayor.

Van Buren, Ark.—City has had plans prepared by T. E. Basham, Van Buren, for school building; brick; four rooms; construction under supervision of architect.

Washington, D. C.—Bliss Electrical School, Louis D. Bliss, president, 219 G street N. W., recently reported to purchase and improve Hotel Takoma building, will install new plumbing and complete steam-heating plant; entire building is being painted, papered and refurnished; classrooms are being made by removal of partitions; work to be completed by September 30.

Waverly, Tenn.—County Board of Education awarded contract to J. A. Chrisman, Nashville, Tenn., for erection of school building at Waverly; brick; aggregate cost \$5000.

THEATERS

Jennings, La.—Houssiere-Latreille Oil Co. awarded contract to E. E. Carroll, Shreveport, La., to erect opera-house, office and lodge building; three stories, 44x89 feet; pressed brick; stone and marble trimmings; opera-house on first floor, with seating capacity of from 600 to 800; offices on second floor and lodgerooms on third floor; cost about \$27,000; plans by I. C. Carter, Rig-malden Building, Lake Charles, La. (Noted in June.)

Norfolk, Va.—Royal Theater Corporation, C. St. John Howard, vice-president, awarded contract to D. J. Phipps, Newport News, Va., for erection of theater building recently mentioned; for moving pictures; plans by Taylor & Hepburn, Norfolk; brick building; 25x90 feet; steam heat; cost \$9000.

WAREHOUSES

Atlanta, Ga.—Miller Real Estate & Investment Co. will rebuild warehouse recently reported burned; structure 150x251 feet; steam heat; electric lighting; freight elevator; cost not announced; architect not selected.

Birmingham, Ala.—Birmingham Realty Co. has permit to erect warehouse; three stories; brick; cost about \$15,000.

Baltimore, Md.—Baltimore Fidelity Warehouse Co., 812 Continental Building, will complete Maryland Storage Co.'s building reported purchased last week; structure to be six stories high, 190x200 feet, of reinforced concrete with brick curtain walls, electric wiring and steam heat, costing about \$150,000. Hopkins-Barnett Company, 1157 Calvert Building, was contractor for building and will probably complete it for new owner.

Chester, S. C.—Chester County Farmers' Warehouse Co., J. G. L. White, president, has had plans prepared by J. Hamilton of Chester for standard warehouse, 50x150 feet; cost \$5000; bids opened July 28. (Recently mentioned.)

Knoxville, Tenn.—J. M. Dunn & Son, Knoxville, have contract to erect three-story warehouse for William Cox; plans by Richard Garf, architect, Richmond.

Memphis, Tenn.—D. O'Donnell & Co., 126 Monroe avenue, will erect \$3500 warehouse; plans by Thomas Yarwood, 836 Thomas street, Memphis; one-story building; cellar; electric lighting; hand power elevator; for natural mineral and glassware storage. (See "Machinery Wanted.")

Nashville, Tenn.—Merchants' Wholesale Warehouse Co. has made financial arrangements for extension of present warehouse building, which is 500x300 feet, four stories high, with basement and sub-basement, of monolithic concrete construction; extension proposed will be 380 feet 6 inches, of fire-proof concrete construction, similar to present building; divided into 11 25-foot units and one 30½-foot unit; will be equipped with sprinkler system for fire protection; rat-proof; complete building as projected will contain 7,000,000 cubic feet, cover two acres of ground and have 10 acres of floor space; will also have access to 44 cars on two tracks at rear of building; dividing walls of concrete blocks, and will make each warehouse a separate structure, containing elevators, etc.

Pensacola, Fla.—Welles-Kahn Company is having plans prepared for extension of warehouse; addition will be two stories, about 125x225; one-story portion of structure will be made two stories; front will be remodeled.

Repton, Ala.—Farmers' Union Warehouse Co., incorporated with \$10,000 capital stock by T. H. Brantley, J. J. English, N. E. Matheny and others.

Roanoke, Va.—Nelson Hardware Co. will erect two-story warehouse; 85x100 feet; reinforced concrete; cost \$20,000; plans by H. H. Huggins, Terry Building, Roanoke, Va.

Statesboro, Ga.—Farmers' Co-operative Union Warehouse Co., incorporated with \$10,000 capital stock; temporary officers are: Joshua Smith, president; D. E. Bird, vice-president; W. M. Tankersley, secretary-treasurer.

RAILROAD CONSTRUCTION

RAILWAYS

Ashville, N. C.—The Asheville Fuel & Dry Co. has been given the contract to build the line for the Weaverville Electric Co., four miles long, from New Bridge Station, on the Asheville Rapid Transit line, to

Weaverville. B. M. Lee is engineer in charge.

Ava, Mo.—A letter to the Manufacturers' Record says that the Kansas City, Ozarks & Southern Railway Co., recently chartered, has begun grading, and tracklaying will shortly start on its line from Mansfield to Ava, Mo., 15 miles.

Baltimore, Md.—The Baltimore & Washington Transit Co. is reported to have given bond to build its proposed line in the District of Columbia from Takoma Park to connect with the Capitol Traction Co.'s line in Washington, D. C. The company is also authorized to build in Maryland. The officers are: President, Henry W. Williams of Baltimore, Md.; vice-president and general manager, William A. Mellen, Washington, D. C.; secretary, George Schedel of Baltimore; treasurer, Norton M. Little of Washington. Other members of the board of directors are Howard Fisk and William M. Terrell of Washington and Dr. E. H. Lefler of Millersburg, Pa.

Beaumont, Texas.—An officer of the Gulf, Colorado & Santa Fe Railway writes the Manufacturers' Record confirming the report that rebalasting will be done on the Beaumont division, but saying that it will be handled by the company forces. The work will include 16 miles of track from Rayburn east.

Beaumont, Texas.—A. C. Barber of Cleburne, Texas, and W. A. Barber are reported to be interested in building a tramroad from Maurice to Landry, connecting with the Orange Northwestern Railway.

Beaver City, Okla.—The Beaver Valley & Northwestern Railroad Co., lately chartered, is reported to have organized by electing J. W. Webb of Beaver president; W. N. Holt of Gage, vice-president; Frank Laughlin of Beaver, treasurer; C. H. Holmes of Gage, secretary; E. F. Rose of Catesby, F. J. Bird-shall of Madison, J. M. Kerns of Sunset, F. C. Caley of Caleyville, W. E. Smith of Sunset, Okla., and James Tack of Wichita, Kan., as directors. A committee was appointed to make survey and secure right of way for the proposed line from Gage, Okla., via Beaver City to a connection with the Santa Fe in Kansas.

Columbus, Ga.—J. Albert Kirven has been appointed chairman of a committee by the Columbus Board of Trade to make application for a charter for the Montgomery & Columbus Railroad Co. to build a line 78 miles long, from Columbus, Ga., westward to Montgomery, Ala., via Crawford, Marvin, Society Hill, Tuskegee and other towns.

El Reno, Okla.—Construction is reported resumed on the Rock Island yards in El Reno. There are 220,000 cubic yards of earth to be moved.

Ennis, Texas.—W. J. Newcom of Terrell, Texas, is reported to be promoting plans for a railroad 67 miles long to connect Ennis and Waco, Texas.

Fernandina, Fla.—S. A. Swann, president of the Board of Trade, and others are reported interested in a movement to build a railroad from Fernandina to Hilliard to connect with the Atlantic Coast Line.

Floydada, Texas.—W. M. Massie of Floydada is reported to have again taken up his plan to build a railroad connecting Floydada with a trunk line northwest.

Galveston, Texas.—The Galveston Terminal Railway Co. is reported, will make improvements in consequence of its approved issue of \$1,106,000 first mortgage bonds. P. G. Burns is chief engineer at Houston, Texas.

Houston, Texas.—Work on the interurban railway which is to extend from Houston to Harrisburg is reported to be progressing rapidly, and cars are expected to be running by October 15. J. B. Townsend is superintendent of construction for the Stone-Webster Syndicate at Houston.

Huntsville, Ala.—Ground has been broken one mile west of Huntsville for the Nashville & Huntsville Electric Railway. Tracy W. Pratt, vice-president, started the work. W. J. Bennett & Co. are the contractors. J. E. Toney, who has a contract on another section, is preparing to begin work.

Johnson City, Tenn.—The Carolina, Clinchfield & Ohio Railway—formerly South & Western—is reported to have let a contract to the Asheville Fuel & Dry Co. for grading on the line near Glenwood, N. C. It is said that the work will be done by steam shovels. R. M. Ramsey is president of the contracting company at Asheville, N. C.

Knoxville, Tenn.—Construction on the Knoxville, Sevierville & Eastern Railways is in progress near the Ross quarries, four miles east of Knoxville. W. J. Oliver & Co. is the contractor; line 25 miles long, from Knoxville to Sevierville, Tenn.

Lake Charles, La.—The Lake Charles Rail-

way & Navigation Co. has been chartered with \$50,000 capital to build a logging road through timber land for the Powell Lumber Co., to operate towboats and to build wharves. The directors are W. P. Weber, president; George M. King, vice-president and treasurer, and D. A. Kelly, secretary.

Lexington, Ky.—The Lexington Interurban Railways Co. has filed a mortgage to secure \$300,000 of bonds to the Guarantee Trust & Safety Deposit Co. of Philadelphia. Improvements as heretofore described are proposed.

Macon, Ga.—The Georgia Securities Co., controlling the Atlanta, Griffin & Macon Electric Railway Co., is reported to be completing arrangements to begin work on the construction of its line from Atlanta to Macon, Ga. W. Jordan Massee of Macon is president.

Mangum, Okla.—An officer of the Rock Island system writes the Manufacturers' Record that the company has no expectation of building any new lines at present. This refers to the press report that the company would build from Mangum, Okla., to El Paso, Texas.

Martinsburg, W. Va.—Mr. F. Vernon A'ier, attorney-at-law, writes the Manufacturers' Record that he is counsel for the promoters of a trolley line in Berkeley county, but he cannot now give any information on the subject.

Mount Sterling, Ky.—An officer of the Cincinnati, Kentucky & Virginia Railroad Co. is reported as saying that the company has been incorporated in Kentucky to build from the Ohio river near Cincinnati, Ohio, south-east to the western boundary of Virginia, 100 miles, and survey has been made for 40 miles. The work will include a number of tunnels and bridges. Harold R. Stone is president and T. C. Bayland is vice-president at 211 Railway Exchange Building, Chicago, Ill. W. D. Gerber is chief engineer at Yale, Ky. Mr. Stone is also president of the Licking River Railroad at Yale, Ky.

Nashville, Ark.—The Memphis, Paris & Gulf Railroad Co. is reported, will build an extension to Murfreesboro, Ark. W. W. Brown is president and C. C. Henderson vice-president and general manager, both at Nashville, Ark.

Pensacola, Fla.—The Pensacola, Mobile & New Orleans Railroad Co. has applied for a franchise in the western part of Pensacola.

Perry, Okla.—Reported that the Santa Fe system will extend the Tonkawa branch to Perry, Okla. C. A. Morse is chief engineer at Topeka, Kan.

Purcell, Okla.—Mr. F. C. Hand, chief engineer of the Oklahoma Central Railroad, informs the Manufacturers' Record that there is nothing doing at present, this being in reference to a report that an extension was contemplated from Chickasha via Anadarko and other points to a connection in Kansas.

Quanah, Texas.—The Quanah & Southwestern Construction Co. contemplates building a standard-gauge railroad from Quanah to Paducah, Texas.

Roanoke, Va.—The Roanoke & Bent Mountain Railway Co. has been chartered to build a steam railroad 45 miles long, from Roanoke through Floyd county to Floyd, Va. The incorporators are William H. Price, president, Elliston; J. Coles Terry, first vice-president, Bent Mountain; S. S. Greenwood, second vice-president, Cave Spring; S. G. Whittle, secretary and treasurer, Roanoke, Va.

Roly, Texas.—The Estacado & Gulf Railway Co. is reported to have finished grading to a connection with the Kansas City, Mexico & Orient Railway, and grading east of McAuley will be started immediately.

Salem, Va.—J. W. Hancock, general manager of the Roanoke Railway & Electric Co., writes the Manufacturers' Record that the company has not obtained a franchise in Salem for an extension, but that the town has advertised such a franchise for sale.

San Marcos, Texas.—Mayor J. R. Porter informs the Manufacturers' Record that he does not know of anything definite which has been done toward building the interurban railway from Luling to San Marcos, but he thinks it would be a paying investment.

Stonega, Va.—R. Horneck, railroad contractor, is quoted as saying that he has finished grading, and tracklaying has begun on the extension of the Interstate Railroad to Norton, Va. A. H. Reeder is general manager at Stonega.

Sulphur, Okla.—Reported that construction will begin immediately from Sulphur toward Oklahoma City on the Coalgate, Sulphur & Western Railway. F. L. Shaner, W. H. Shaner and A. C. Frost of Milwaukee; Otto R. Hanson of Chicago and others are interested.

A. C. Frost is president and W. H. Shaner vice-president. Route is from Sulphur via Davis, Wynnewood, Pauls Valley and Lexington to Oklahoma City.

Tampa, Fla.—President Henry M. Atkinson of the Tampa Northern Railroad is reported as saying that an extension will be built to Thomasville, Ga. His address is Atlanta, Ga.

Woodward, Okla.—The Canadian River Railway Co., which proposes to build a line in Oklahoma, is reported to have added to its directors Charles A. Burden of Boston, Mass.; Henry C. Morand of New York; F. M. Hamilton of Raton, N. M.; B. W. Key and A. M. Appleget of Woodward, Okla.

STREET RAILWAYS

Charlotte, N. C.—The Charlotte Power Co. has been incorporated under New Jersey laws with \$300,000 capital to build and operate an electric railway, besides electric and gas plants. The Southern Power Co. of Charlotte is a stockholder therein, other stockholders being connected with the latter company thus: W. S. Lee, vice-president and chief engineer; L. C. Harrison, assistant secretary; R. B. Arrington, treasurer, and W. H. Martin, assistant treasurer. The new company, it is said, contemplates building an electric railway to connect with other towns, but an officer is quoted as saying that nothing definite is determined.

Chattanooga, Tenn.—The Chattanooga Railways Co., it is reported, will extend its line to the top of Lookout Mountain. John Graham is president.

Fort Smith, Ark.—The Fort Smith Light & Traction Co. is reported to have made rapid progress on the extension of the Townson-avenue line to Arkoma, in Oklahoma, two and one-half miles, and tracklaying will begin immediately.

Knoxville, Tenn.—The Knoxville Railway & Light Co. contemplates building considerable double track, some of which has been started.

Lake Charles, La.—The Manufacturers' Record is informed that the Lake Charles Railway & Light Co., recently incorporated, has capital of \$750,000, of which \$250,000 are preferred stock and \$500,000 common stock. Thompson J. Bird is president. The company, as heretofore reported, is to take over the Lake Charles Street Railway Co., and it may build or own street railways or interurban lines anywhere in Louisiana, besides operating light and power plants.

Little Rock, Ark.—The Little Rock Railway & Electric Co. is reported to contemplate building an extension of the Pulaski Heights line to the insane asylum.

Paxton, Fla.—J. T. Hughes of Florida, Ala., is applying for a street-railway franchise.

Pensacola, Fla.—Louis Boley has applied for an electric-railway franchise for passenger and freight service, the line to be on Hayne street, from Wright street north to the city limits.

Pensacola, Fla.—The C. H. Turner Construction Co., it is reported, has been given the contract to rebuild the railway at Fort Barancas at its bid of \$5000.

Tampa, Fla.—The Tampa Electric Co. is reported to have begun an extension 23 blocks long from Thirteenth street along East Seventh avenue to Thirty-sixth street. Other extensions are expected.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air-power Water Equipment.—See "Water-supply System."

Alcohol Stoves, etc.—Robert L. Whitcomb, Evergreen, Ala., wants prices and descriptions of alcohol stoves, flatirons, etc., for household use.

Asphalt.—Muskegee, Okla., expects to invite bids within three weeks for \$300,000 worth of asphalt: L. B. Kinsey, City Engineer.

Basket and Crate Machinery.—C. L. Wiseman, Keyser, W. Va., wants data and prices on machinery for manufacturing fruit and berry crates and baskets, also prices on splits for fruit baskets.

Bathroom Fixtures.—M. J. Ross, Ocala, Fla., wants bathroom fixtures for \$7500 residence.

Belting.—W. H. Flaherty, 116 Winthrop street, Brooklyn, N. Y., wants belt 36 inches to 40 inches wide by 60 feet to 70 feet long; leather or rubber.

Belting.—J. E. McGehee, Chatham, Miss., wants thin flexible belting (leather, cloth or metal), three-eighths of an inch wide, with rough, bristly surface on one side.

Bicycles, etc.—H. Aunis Flis, Noirmoutier, France, wants to represent American manufacturers of bicycles, motor cycles, table knives; suspension, wall and column lamps; white silver, Inoxydized and English-metal jewelry; typewriters, duplicating machines, copying machines, etc.

Boiler.—Town Council, Richlands, Va., will need one 150-horse-power return tubular boiler complete with stack and fittings. (See "Water-works Supplies.")

Boiler.—See "Concrete Mixers."

Boiler-works Machinery.—Twin City Boiler and Sheet-Iron Works, 304 8th street, Bristol, Tenn., will open bids October 1 for boiler-works machinery.

Bottling Machinery.—See "Horseshadish Machinery."

Brick Wall.—See "Paving and Curbing."

Bridge Construction.—McMullen County Commissioners, Tilden, Texas, will open bids August 12 for construction of steel bridge across San Miguel river; W. C. Wheeler, County Judge.

Bridge Work.—William Farris & Bros., 201 Diamond Bank Building, Pittsburg, Pa., are inviting proposals on flooring and 700 yards of concrete foundations for bridge.

Building-block Molds.—See "Concrete-block Machinery."

Building Materials.—M. J. Ross, Ocala, Fla., wants building materials for \$7500 residence—mill work, sash, doors, blinds, furniture, plaster, bathroom fixtures, plumbing, electrical fixtures, etc.

Cable.—James Wilson, secretary U. S. Department of Agriculture, Washington, D. C., will receive bids at office of disbursing clerk until August 7 to furnish lead-covered power cable; information on application to disbursing clerk.

Cans.—Village Improvement Society, Mrs. S. H. Smith, committee, Oxford, N. C., wants prices and catalogues on street cans or baskets for waste paper, etc.

Carpet Machinery.—See "Rug Machinery."

Chimney Construction.—See "Concrete Chimney."

Concrete-block Machinery.—F. L. Howell, Warrenton, Ga., wants molds or box patterns for use in erection of concrete building 40x15 feet, with 20-foot walls; has quantity of brickbats; hollow-block machine will not be considered.

Concrete Chimney.—J. B. Winslett, City Secretary, Dallas, Texas, will receive bids until August 15 for construction of chimney for pumping station near Turtle creek, in accordance with specifications on file in his office; chimney to be 7 feet minimum inside diameter, and 140 feet above boiler-room floor; to be constructed of concrete or other material, each bidder to submit plans, details, sizes, method of construction and strain sheets; bidders to furnish all material, tools and labor; certified check \$500.

Concrete Mixers.—John M. Greene, Drexel Building, Philadelphia, Pa., wants small batch concrete mixers, with engine and boiler, or gasoline engines, on trucks; second-hand.

Concrete Work.—See "Bridge Work."

Cooperage.—Woodstock Hardwood & Spool Manufacturing Co., Box 615, Charleston, S. C., in market for large quantities of box shooks and cooperage stock.

Corn Mills.—Lewisburg Milling Co., Lewisburg, Ky., wants corn shucker and sheller.

Dam Construction.—Bids will be opened August 10 at U. S. Engineer's office, Wheeling, W. Va., for construction of abutment for dam No. 19, Ohio river, at Wheeling; F. W. Altstaetter, Captain, Engineers.

Derrick.—Southern Erecting Co., 306 West Building, Jacksonville, Fla., in market for stiff-legged derrick; new or second-hand; 10 tons capacity; mast 32 feet long, 12x14; boom 65 feet long, 14x16; sills and legs 10x12; want price on derrick complete with necessary blocks and all timber; also price for derrick irons and blocks alone; f. o. b. Jacksonville.

Dies.—See "Glove Machinery."

Ditching Machinery.—Corinth Engine & Boiler Works, Corinth, Miss., wants data and prices on ditching machinery, preferably operated by gasoline power.

Door and Blind Clamp.—Ford-Osborn Lumber & Mill Co., Cleburne, Texas, wants single-motion door and blind clamp; good second-hand machine preferred.

Drill.—See "Machine Tools."

Electrical Equipment.—Raleigh Cotton Mills, Raleigh, N. C., will open bids August 4 for electrical driving equipment; 400 horse-power.

Electrical Fixtures.—M. J. Ross, Ocala, Fla., wants electrical fixtures for \$7500 residence.

Electrical Machinery.—Caraleigh Mills Co., Raleigh, N. C., will buy electrical machinery for operating spindles, looms, etc.

Electrical Machinery.—Wm. J. Oliver Manufacturing Co., Knoxville, Tenn., wants 100-horse-power dynamo, alternating current, General Electric; second-hand.

Electrical Machinery.—John A. Weddell, Tarboro, N. C., in market for belted generator, alternating current, General Electric or Westinghouse, 150 kilowatts to 200 kilowatts, 1100 volts, 60-cycle, single-phase, to work with engine having 72-inch drive and 24-inch-face pulley, 200 revolutions.

Electric Conduits.—See "Mains and Conduits."

Electric Generator, etc.—Town Council, Richlands, Va., will need one 75-kilowatt generator complete with switchboard, two miles of wiring, one 100-horse-power engine to operate complete electric plant; C. B. Neal, chairman of committee.

Elevator.—D. O'Donnell & Co., 126 Monroe street, Memphis, Tenn., may want hand-power elevator.

Elevator.—Treasury Department, office of Supervising Architect, Washington, D. C. Proposals will be received until August 7 for electric passenger elevator, well hole, enclosure, etc., in the U. S. Courthouse and Post-office at Cumberland, Md., in accordance with drawings and specification, copies of which may be obtained at this office at the discretion of James Knox Taylor, Supervising Architect.

Engine.—W. H. Flaherty, 116 Winthrop street, Brooklyn, N. Y., wants marine compound engine, 50 to 100 horse-power.

Engine.—Town Council, Richlands, Va., will need one 100-horse-power engine to operate electric plant; C. B. Neal, chairman of committee.

Engine.—W. P. Jackson, Salisbury, Md., wants high-speed self-contained engine of 80 to 125 horse-power.

Engine.—See "Gasoline Engine."

Engine.—See "Gasoline Engine."

Engine and Boiler.—John M. Greene, Drexel Building, Philadelphia, Pa., wants engine and boiler or gasoline engine for concrete mixers. (See "Concrete Mixers.")

Engines.—See "Gas Engines."

Feed Grinder.—Lewisburg Milling Co., Lewisburg, Ky., wants feed grinder.

Flatirons.—See "Alcohol Stoves, etc."

Flooring.—See "Bridge Work."

Freight Cars.—See "Railway Equipment."

Furnace (Heating).—See "Heating Plant."

Furniture.—M. J. Ross, Ocala, Fla., wants furniture for \$7500 residence.

Gas Engines.—American Gas & Development Co., 1243 Calvert Building, Baltimore, Md., wants three second-hand gas engines, 50, 100 and 150-horse-power, respectively; perfect condition; give name and address of maker, number of machine and time same has been used.

Gasoline Cars.—See "Motor Cars."

Gasoline Cars (Railway).—See "Motor Cars."

Gasoline Engine.—See "Concrete Mixers."

Gasoline Engine.—Perry-Jones Company, Grenada, Miss., wants gasoline engine. (See "Water-supply System.")

Gasoline Engine.—George C. Richardson, 615 Water street, Baltimore, Md., wants 7 to 8-horse-power gasoline engine.

Glass.—See "Plate Glass."

Glass.—See "Window Glass."

Glove Machinery.—J. A. Shuping, Morganton, N. C., wants to buy dies for cutting canvas gloves and mittens, and other glove machinery.

Grinder.—See "Feed Grinder."

Grinders (Paper).—See "Paper Machinery."

Grinding.—See "Horseshadish Machinery."

Heating Plant.—Chas. E. Manor, Stanleyton, Va., in market for hot-water heating plant for 10-room residence.

Heating Plant.—Haynes-McLean School, M. M. Summar, principal, Lewisburg, Tenn., in market for furnace to heat school building.

Heating Plant.—C. St. John Howard, Box 621, Norfolk, Va., wants prices on steam-heating plant for \$9000 moving-picture theater.

Heating Plant.—Baltimore (Md.) Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until July 29 for low-pressure direct indirect gravity return steam-heating plant to be installed at No. 40 School, Alsquith and Orleans streets; certified check, \$500; specifications on file at office of Edward D. Preston, Building Inspector, City Hall.

Hoisting Machinery.—See "Derrick."

Horseshadish Machinery.—Glencoe Canning Co., Glencoe, Ky., wants prices on machinery for manufacturing and bottling horseshadish.

Ice Plant.—T. N. England & Co., Horse Cave, Ky., will contract for five-ton ice plant.

Iron.—Ardmore Fire Escape Co., Box 137, Ardmore, Okla., wants prices on angle iron and angles.

Iron Work.—Geo. Leigh & Bro., Louisa, Va., in market for iron work for 65x123-foot two-story school costing \$33,000.

Iron-works Equipment.—See "Boiler-works Machinery."

Lath Machinery.—C. L. Wiseman, Keyser, W. Va., wants data and prices on lath machinery.

Lathe.—Jon. H. Thompson, 17 Battery place, New York, in market for lathe, 24-foot bed, 42 or 48-inch swing; patent screw and taper attachment; second-hand.

Lathe.—See "Machine Tools."

Levee Construction.—Mississippi Levee Commissioners, Greenville, Miss., will open bids August 3 for construction of about 900,000 cubic yards of embankment in Mississippi levee district. Plans, profiles, specifications and information may be obtained from Robert Somerville, assistant chief engineer, at office of Board. All bids must be accompanied by forfeit of 3 per cent.

Levee Construction.—Mississippi River Commission, Fourth District, 1539 Louisiana avenue, New Orleans, La., will open bids August 24 for constructing about 189,500 cubic yards of levee in Lower Tensas and Pontchartrain Levee districts; information on application. Wildurr Willing, First Lieutenant, Engineers.

Locomotives and Dump Cars.—Bids will be received at office of P. C. Boggs, Captain, Corps of Engineers, U. S. A., general purchasing officer, Isthmian Canal Commission, Washington, D. C., until August 13 to furnish locomotives and dump cars; blanks and general information relating to Circular No. 58 may be obtained from above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburg, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Business Men's League, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.

Looms (Rug).—See "Carpet Machinery."

Lumber.—See "Cooperage."

Lumber.—C. L. Wiseman, Keyser, W. Va., wants prices on splits for fruit baskets.

Machine Tools.—See "Lathe."

Machine Tools.—Walter R. Blake, Sidney, Ohio, wants radial drill and engine lathe of 30 or 36-inch swing, with bed about 20 or 25 feet long.

Machine Tools.—See "Punch and Shear."

Mains and Conduits.—Bids will be received at office of Committee on Buildings, U. S. Department of Agriculture, B. T. Galoway, chairman, Washington, D. C., until August 6 for laying underground steam mains and electrical conduits on grounds of U. S. Department of Agriculture, in accordance with drawings and specifications, copies of which may be obtained at office of mechanical engineer.

Metal Belting.—See "Belting."

Mill Work.—J. F. Barbour & Co., Roanoke, Va., wants estimates on mill work on apartment-house containing 16 apartments.

Mining Machinery.—J. M. Crowell, Stony Point, N. C., wants machinery for mining corundum.

Mirrors.—A. L. Miller, care of Homestead Development Corporation, No. 5 Monticello Arcade, Norfolk, Va., wants quotations on mirrors.

Miscellaneous Supplies.—Bids will be received at office of general purchasing officer,

Isthmian Canal Commission, Washington, D. C., until August 24 to furnish cross ties, lumber, steel flat cars, push and hand cars, track gauges and levels, jacks, etc.; blanks and general information relating to Circular No. 459 obtainable from above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans, 1086 North Point street, San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburg, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Business Men's League, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., general purchasing officer.

Motor Cars.—J. T. Hughes, Florida, Ala., will need four gasoline motor cars for railway.

Motor Cars.—A. V. Kaiser & Co., 739 Drexel Building, Philadelphia, Pa., in market for four standard-gauge gasoline motor cars.

Nails.—A. L. Miller, care of Homestead Development Corporation, No. 5 Monticello Arcade, Norfolk, Va., wants quotations on nails.

Paper Machinery.—Ernst Hagen, 1821 Upperline street, New Orleans, La., wants addresses of manufacturers of paper machinery, especially of grinders for pulp.

Paving.—Boards of Commissioners, Hot Springs, Ark., will open bids August 15 for street paving according to plans and specifications on file with F. V. P. Ellsworth, City Engineer, in following improvement districts: No. 21, 5000 square yards surface, 1670 cubic yards excavation; No. 26, 3200 square yards surface, 1730 cubic yards excavation; No. 30, 1400 square yards surface, 4670 cubic yards excavation; No. 32, 18,000 square yards surface, 6000 cubic yards excavation. Address Mr. Ellsworth.

Paving and Curbing.—Board of Public Works, L. G. Aymard, clerk, Pensacola, Fla., will open bids August 5 for paving, curbing and building brick wall around city jail; work consists of about 875 square feet concrete sidewalk, 700 square feet tile walk to be relaid, 200 lineal feet of concrete curbing, 137 lineal feet of brick wall; specifications and blank proposal forms may be obtained from L. Earle Thornton, City Engineer.

Paving.—City Clerk, Muskogee, Okla., will receive bids until August 3 on brick paving district, amounting to about \$150,000; L. B. Kinsey, City Engineer.

Paving.—John W. Flournoy, City Clerk, Elk City, Okla., will receive bids until August 3 for furnishing material and paving Main street and Broadway from Madison to Adams street with vitrified brick, with shale base, sand cushion and asphaltum filler; Broadway from Adams to Randal street with sheet asphaltum; paving to include ditch, basins, manholes, sewer, guttering, curbing and draining; plans prepared by City Engineer, on file in office of Mr. Flournoy.

Paving.—City of Fayetteville, N. C., wants plans and estimates on street paving; kind of paving not decided; \$270,000 available. Address J. F. L. Armfield, chairman street committee.

Pipe.—W. H. Flaherty, 116 Winthrop street, Brooklyn, N. Y., wants 1500 feet 18-inch or 20-inch wrought, cast or spiral pipe for dredging; also 150 feet 18-inch cast iron.

Piping.—Town Council, Richlands, Va., will need 200 feet 8-inch wrought suction pipe; 2000 feet cast-iron discharge pipe, with necessary valves, etc., in connection with water-works construction; if gravity water-supply system is installed, will need about three miles of 4-inch or 6-inch cast-iron pipe; also about 3000 feet sewer pipe, 12-inch to 24-inch. (See "Water-works Supplies.")

Piping.—Baltimore (Md.) Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until August 5 for furnishing and delivering complete to Water Board special cast-iron flanged pipe and fittings for gatehouse at new high-service reservoir, according to plans and specifications, which may be obtained at office of Alfred M. Quick, Water Engineer; certified check, \$500.

Plate Glass.—J. M. Barker, Interstate Building, Bristol, Tenn., wants prices on plate glass.

Plumbing.—M. J. Ross, Ocala, Fla., wants plumbing for \$7500 residence.

Porcelain-lined Tank.—D. O'Donnell & Co., 126 Monroe avenue, Memphis, Tenn., may want porcelain-lined tank for mineral-water storage.

Pump.—Town Council, Richlands, Va., will need one pump, 8-inch suction, 6-inch dis-

charge, to work under pressure of about 125 pounds. (See Water-works Supplies.)

Punch and Shear.—Roanoke Iron Works, Roanoke, Va., wants prices and specifications on single and combination punch and shear.

Quarrying Machinery.—A. V. Kaiser & Co., 739 Drexel Building, Philadelphia, Pa., in market for channeller (Sullivan, Class VY).

Rails.—A. V. Kaiser & Co., 739 Drexel Building, Philadelphia, Pa., in market for eight miles of rails with splices complete.

Rails, etc.—J. T. Hughes, Florida, Ala., will need eight miles of rails with splices complete; also four gasoline motor cars.

Railway Cars.—Jos. E. Bowen, Bank of Commerce Building, Norfolk, Va., in market for two oil tank cars, one caboose car, four box cars, and three flat cars of 50,000 pounds capacity each.

Railway Cars.—A. V. Kaiser & Co., 739 Drexel Building, Philadelphia, Pa., in market for five standard-gauge boxcars, 40,000 pounds capacity.

Railway Equipment.—See "Motor Cars."

Railway Equipment.—See "Locomotives and Dump Cars."

Road Construction.—Campbell County Road Commission (R. B. Baird, William M. Keeney and Henry Miller), Jacksboro, Tenn., will open bids August 15 for construction of road from LaFollette to Newcomb, Tenn.; plans and specifications at office of commission, Jacksboro; certified check \$200.

Road Excavating and Grading.—Board of Control (Robert Johnston, chairman, and T. S. Purdie), Portsmouth, Va., will open bids August 1 for excavating and grading about 20,000 cubic yards of roadways and slopes at "Forest Lawn" Cemetery; plans and specifications at office of City Engineer.

Road Roller.—Greensville county, Virginia, will buy 10-ton steam roller on July 27. Address H. W. Hall & Co., Emporia, Va.

Roofing Material and Tools.—McGee Concrete & Construction Co., Greenville, S. C., wants material and tools for tar and gravel roofing.

Rug Machinery.—Oriental Rug Co., Martinsburg, W. Va., wants addresses of manufacturers of machines for cutting old carpets for rug making; also machines for fraying or ravelling strips after they are cut.

Saw.—Walter R. Blake, Sidney, Ohio, wants swing cutoff saw.

Sewer Construction.—Board of Aldermen, Vicksburg, Miss., will receive bids until September 7 for constructing complete system of house sewers, approximating 30 miles 8 to 27-inch pipe sewers, with 400 manholes and 100 flush tanks; deposit 3 per cent. of bid; plans on file at City Hall, Vicksburg; for information and specifications address Walter G. Kirkpatrick, engineer, Jackson, Miss.

Sewer Construction.—Board of Awards will open bids August 5 at office of J. Sewell Thomas, City Register, City Hall, Baltimore, Md., for construction of storm-water drains. Approximate quantities: 250 linear feet 138-inch by 132-inch drain; 270 linear feet 36-inch circular drain; 40 linear feet 24-inch circular drain; 24 linear feet 15-inch circular drain; 40 linear feet 15-inch inlet connections; 250 linear feet 8-inch underdrain; 70 cubic yards brick masonry; 730 cubic yards concrete; 1500 cubic yards embankment; 32 linear feet manholes; 2 inlets. Plans and specifications on file at office of Sewerage Commission, 904 American Building, Baltimore; deposit of \$2.25 for specifications with blueprints; certified check, \$1000, payable to Mayor and City Council; J. Barry Mahool, president Board of Awards.

Sewer Construction.—Bids will be opened August 14 for construction of reinforced-concrete sewer on Broadway, Louisville, Ky.; 970 feet, 39 inches in diameter; 480 feet, 33 inches in diameter; average depth of cut about 9 feet; approximately 290 cubic yards of concrete; and on August 21 for construction of Section "D" of southern outfall sewer; reinforced concrete; 770 feet concrete, 13 feet 9 inches in diameter; 2763 feet concrete, 13 feet 6 inches in diameter; 1037 feet concrete, 13 feet 3 inches in diameter; 1360 feet concrete, 13 feet in diameter; principal items in estimate approximately as follows: Depth of cut, 26 to 42 feet; concrete masonry, 11,000 cubic yards; reinforced steel, 600,000 pounds; certified checks at least 7 per cent. amount of bids. Plans and specifications for both sewers on file at office of Commissioners, Louisville, and of consulting engineer, Harrison P. Eddy of Metcalf & Eddy, 14 Beacon street, Boston, Mass.; J. F. B. Reed, chief engineer; P. L. Atherton, chairman. (See "Sewer Construction.")

Sewer Construction.—Muskogee, Okla., expects to invite bids within three weeks on sanitary sewer lateral amounting to about \$12,000; L. B. Kinsey, City Engineer.

Sewer Pipe.—Bids will be opened August 6 at office of City Clerk for furnishing and distributing 500 linear feet of No. 1 double-strength vitrified sewer pipe 24 inches in diameter on Green street between North and London streets, Portsmouth, Va.; pipe must be bid for at so much per linear foot, distributed on street, and be delivered not later than September 20, 1908; certified check, \$100, payable to George A. Tabb, City Treasurer; E. B. Hawks, S. T. Montague, chairman Street Committee; Bascom Sykes, City Engineer.

Slate.—A. L. Miller, care of Homestead Development Corporation, No. 5 Monticello Arcade, Norfolk, Va., wants quotations on slate.

Steam Mains.—See "Mains and Conduits."

Steel Beams.—J. M. Barker, Interstate Building, Bristol, Tenn., wants prices on steel beams.

Stone.—Bids will be received at U. S. Engineer's office, Washington, D. C., for 8000 tons rip-rap stone until August 31; information on application; Earl I. Brown, Captain, Engineers.

Stoves.—See "Alcohol Stoves, etc."

Tank.—See "Porcelain-lined Tank."

Tanks.—George C. Richardson, 615 Water street, Baltimore, Md., wants wooden tank 25,000 to 50,000 gallons capacity, mounted on steel structure; also one of 10,000 gallons capacity; second-hand.

Tar and Gravel Roofing.—See "Roofing Material and Tools."

Water-supply System.—Perry-Jones Company, Grenada, Miss., wants gasoline engine to pump water into tank and to operate water from tank through building with air.

Water-works Supplies.—Town Council, Richlands, Va., will need one pump, 8-inch suction, 6-inch discharge, to work under pressure of about 125 pounds; 200 feet 8-inch wrought suction pipe; 2000 feet cast-iron discharge pipe, with necessary valves, etc.; one 150-horse-power return tubular boiler complete with stack and fittings; if gravity water-supply system is installed, will need about three miles of 4-inch or 6-inch cast-iron pipe; C. B. Neel, chairman of committee.

Window Glass.—A. L. Miller, care Homestead Development Corporation, No. 5 Monticello Arcade, Norfolk, Va., wants quotations on window glass.

Wiring.—See "Electric Generator," etc.

Wooden Tanks.—See "Tanks."

Woodworking Machinery.—See "Basket and Crate Machinery."

Woodworking Machinery.—See "Lath Machinery."

Woodworking Machinery.—See "Door and Blind Clamp."

Woodworking Machinery.—A. L. Miller, care of Homestead Development Corporation, No. 5 Monticello Arcade, Norfolk, Va., wants quotations on woodworking machinery.

Woodworking Machinery.—Beach Manufacturing Co., Montrose, Pa., wants suggestions and prices on machinery for utilizing hard and soft maple, two to four inches thick and two to four feet long.

Woodworking Machinery.—Walter R. Blake, Sidney, Ohio, wants 8 or 10-inch sticker or molding machine, planing three or four slides; also swing cutoff saw.

Woodworking Machinery.—Wm. J. Oliver Manufacturing Co., Knoxville, Tenn., wants second-hand heavy woodworking equipment.

INDUSTRIAL NEWS OF INTEREST

Drilling Artesian Wells.

Among the deep wells drilled recently by Sperry & Lukins of Artesia, N. M., are those at Newton, Louin, Laurel and McComb City, all completed this year. The firm drilled a 1500-foot artesian well for the city of McComb and is about to drill another.

The Durango Land Co.

The Durango Land Co. of Memphis, Tenn., owns and controls extensive tracts of timber lands in Mexico, and is prepared to send interesting data to lumber manufacturers and other prospective buyers. Address F. M. Gulich (of W. S. Riles & Co.), secretary.

Mesta Machine Co.

The Mesta Machine Co. of Pittsburg, Pa., has established an office at 844 Commercial National Bank Building, Chicago, Ill., in charge of Lane Johnson. This company builds steam and gas engines, rolling-mill machinery, machine molded gears, steel castings, etc.

Better Demand for Railway Equipment.

A better demand for railway equipment is reported by Joseph E. Bowen, the well-known dealer at Norfolk, Va. He has just sold three new large Vulcan locomotives and many baggage and passenger coaches, rails, etc., to buyers.

Manufacturing Bridges at Memphis.

The Memphis (Tenn.) Bridge Co., Vernon H. Smith, secretary and general manager, C. E. Scherer, chief engineer, with works and offices at Mallory Station, South Memphis, is manufacturing a splendid line of steel structural work. The company invites propositions for anything in the way of designs and estimates in bridges and other structural steel and iron work.

For Box Cranes and Hoists.

The McClary-Jamison Company of Birmingham, Ala., has secured the agency for the cranes and hoists built by Alfred Box & Co., Poplar and Canal streets, Philadelphia, Pa. This agency will meet the demand in Alabama, Louisiana and Mississippi. Box & Co. build jib and traveling cranes, electric or hand power, up to 100 tons capacity, double screw chain hoists, trolley hoists, stokers, etc.

Will Manufacture Vitrified Bricks.

Arrangements are being made by F. H. Hyatt, National Loan and Exchange Bank Building, Columbia, S. C., to develop deposits of shale suitable for manufacturing vitrified bricks. He is organizing the Granite Brick Co. with a capital stock of \$200,000 to mine the clay and operate a plant for producing the bricks. A prospectus has been issued presenting particulars of the deposits and the enterprise as an investment proposition.

Warehouse Facilities at Norfolk.

The city of Norfolk (Va.) is a natural distributing point for the South, with deep-water and railway facilities capable of handling any traffic. Many manufacturers hold stocks at Norfolk, and among the city's firms offering warehouse facilities are Jones & Co., East Main and Water streets. This firm has four large storage warehouses, with 800 feet of waterfront, and can dock the largest vessels. It also has direct connection with all railway and steamship lines having terminals at Norfolk.

Asbestos Sponge Felted Materials Demanded.

Recent contracts secured by the Southern Pipe Covering Co. of Richmond, Va., indicate that its asbestos sponge felted materials are in increasing demand for insulating purposes—heat, cold and sound. They included many orders, the buyers including the Merchants' Cold Storage & Ice Manufacturing Co., the Virginia Banking Co., the American Can Co., the Kentucky Tobacco Product Co. and W. S. Forbes & Co.

J. F. Donahoo Co. at Birmingham.

The J. F. Donahoo Company, for years well known at Washington, D. C., has transferred its activities to Birmingham, Ala., having secured offices and stockrooms at 1905 Second avenue. This company acts as engineer, buyer and seller of steam and electric railway equipment, band and circular saw mills, woodworking plants, mining and quarrying outfits, producer-gas and gas-engine installations, hydraulic machinery, contractors' supplies, etc. J. F. Donahoo and Frank Schultz will be in active charge at Birmingham.

Using Ironton Company's Cement.

A continued demand is reported for the Portland cement manufactured by the Ironton (Ohio) Portland Cement Co. This year's trade with the company has been considerable in general, and it has been especially active in meeting the needs of the Government on various improvements. For Ohio river work the Ironton plant is supplying large quantities. The company's Government contracts for work on two tributaries (Kentucky and Big Sandy) of the Ohio river run into thousands of barrels of Portland cement. Its general manager is A. C. Steele.

All Kinds of Gas Plants.

Gas plants of all kinds are constructed and equipped by E. E. Borst, conducting business under the firm name of Borst & Co., Equitable Building, Baltimore, Md. The firm is making a specialty of gas plants for lighting, fuel and power purposes for cities, factories and private residences. Mr. Borst was for 11 years engineer for Bartlett, Hayward & Co., and constructed gas plants in various cities of the United States. Borst & Co. are agents

for the Weber Gas Engine Co., Kansas City, manufacturer of high-grade gas producers and engines, also of the Acetylene Apparatus Manufacturing Co., Chicago, Ill., said to be the largest manufacturer of acetylene apparatus in the country.

Oxycarbon Gas for Brazing Purposes.

Several weeks ago the Manufacturers' Record referred to the plans of the American Gas & Development Co., 1243 to 1253 Calvert Building, Baltimore, Md., for introducing its oxycarbon gas. The M. & W. Brazing Co., 418 South Charles street, Baltimore, became interested in the new gas and made investigations and some tests for its uses, with the result that J. H. Poole, manager of the company, has written to the American company as follows: "After experimenting with the gas generated by your Highlandtown plant we are convinced that it is a much better gas than what we are now buying. Your gas is so perfect and so powerful that we can do double the work with one-half the consumption of gas. In other words, a casting weighing 100 pounds can be heated to the brazing point with your gas with two of our torches with a capacity of 100 feet of gas per hour in 30 minutes. With other gases we have used it has required to accomplish the same work four of our torches consuming 100 feet of gas per hour and one hour's work to do the brazing. Your gas is necessary to us for the reason that we obtain from it the great heat we find necessary to make the brazing of cast iron and other broken castings a perfect success. We hereby accept your proposition to lease us your Highlandtown plant, as we require your gas for our purposes. While the location does not suit us as well as our present one, owing to the superiority of your gas we realize we cannot afford to heat our work by any other method than the gas manufactured by the American Gas & Development Co."

Necessary for Investigation of Mines.

Where mining operations are concerned it is always advisable that the most approved methods and equipments be used to investigate properties. An instance is cited of a man who invested in a mine and found success ever just beyond the result of his efforts. He finally found his attention directed to drilling with a diamond core drill and producing actual cores of the ore for examination and assay. He investigated various drills and their prices and obtained estimates from drilling contractors, but his stockholders were not willing to furnish the amount needed, and he found a way out of the difficulty by accident when glancing through the pages of an engineering magazine. In the page he read an advertisement of a core drill operated without the use of diamonds, the resulting cores being twice the size of those obtained by the diamond drill and the cost of operation being stated as from 30 to 50 per cent. less. He investigated the possibilities of this drill by a personal visit to the plant where it was manufactured. There he found men familiar with every class of machinery and method for prospecting, and found drills ready to demonstrate their ability to handle any material. His block of unoxidized ore was placed under the drilling tools and a one and three-inch core was extracted at the rate of 14 inches per hour and at a cost of less than 15 cents per foot for drilling supplies and cutting materials. He found chilled-steel shot was used, and the manner in which these cut through the hard rock (quartz, diorite, etc.) was astonishing. It is of interest to add that the Cyclone Drill Co., Orrville, Ohio, manufactures the chilled-steel core drill mentioned, and it is that company's factory which was visited.

TRADE LITERATURE.

New Map of Louisiana.

Rand, McNally & Co., Chicago, have issued a new map of Louisiana, in which all the recently-constructed railroads appear and the 1900 census figures of population are given in detail. Congressional districts and parishes are shown, and a ready-reference index enables an immediate location to be made of any place on the map.

Some Gregory Electrical Information

"What We Do and Where We Do It" is the title of an illustrated booklet that gives some pertinent information regarding the Gregory Electric Co., 16th and Lincoln streets, Chicago, Ill. This company holds large stocks of electrical and steam machinery of standard makes, both new and second-hand, in best operating condition. It has a large plant, where apparatus is overhauled and repaired, and can promptly meet large or small orders.

[Continued on Page 61.]

PROPOSALS INVITED FOR CONSTRUCTION WORK.

Details regarding construction work, proposals invited, etc., noted in the following list, will be found in this and recent issues of the MANUFACTURERS' RECORD and the DAILY BULLETIN OF THE MANUFACTURERS' RECORD.

* Indicates that the item has appeared in our "Machinery, Proposals and Supplies Wanted" department.

Date to open bids. (When date is not given it has not been fixed.)		Published in— Daily Bul- letin.	Manu- facturers' Record.
BRIDGES, CULVERTS, VIADUCTS.			
	Toll Bridge, Farmers, Ky.....	June 26	July 2
	19 Bridges, Chickasha, Okla.....	July 13	July 16
	Concrete Culvert, Pine Bluff, Ark.....	July 13	July 16
Aug. 3	*Three Steel Bridges, Benton, Tenn.....	July 20	July 23
Aug. 12	*Steel Bridge, Tilden, Texas.....	July 27	July 30
ELECTRIC PLANTS.			
	*Electric-light Plant, Burkesville, Ky.....	June 26	July 2
	*Electric-light System, Washington, D. C.....	June 27	July 2
Aug. 1	*Electric Wiring, Oxford, Miss.....	June 25	July 2
MISCELLANEOUS CONSTRUCTION WORK.			
Aug. 1	*Quay Wall, Key West, Fla.....	June 19	June 25
	Torpedo Ships, Charleston, S. C.....	July 2	July 9
July 30	*Canals, etc., Angleton, Texas, \$120,000.....	July 3	July 9
Aug. 12	*Electric Conduits and Wiring, Washington, D. C.....	July 3	July 9
July 31	*Electric Passenger Elevator, Huntington, W. Va.....	July 6	July 9
Aug. 19	*Electric Wiring, etc., Petersburg, Va.....	July 13	July 16
Aug. 7	*Cableways, Isthmian Canal Commission.....	July 10	July 16
Aug. 1	*Marine Railway, U. S., Key West, Fla.....	July 8	July 16
Aug. 12	*Heating Apparatus, Manning, S. C.....	July 9	July 16
Aug. 31	*Electric Conduits, Wiring, etc., Little Rock, Ark.....	July 14	July 16
Aug. 6	*Breakwater, etc., Fort Morgan, Ala.....	July 16	July 23
Aug. 10	*Dams, Mississippi River, New Orleans, La.....	July 17	July 23
Aug. 4	*Exhaust System, Charleston (S. C.) Navy-yard.....	July 22	July 23
Aug. 3	*Levee, Greenville, Miss.....	July 27	July 30
Aug. 6	*Electric Conduits, etc., Washington, D. C.....	July 27	July 30
Aug. 10	*Dam Abutment, Wheeling, W. Va.....	July 23	July 30
Aug. 15	*Concrete Chimney, Dallas, Texas.....	July 29	July 30
Aug. 24	*Levee, New Orleans, La.....	July 28	July 30
ROAD AND STREET IMPROVEMENTS.			
	Concrete Sidewalk, Batesville, Miss.....	July 2	
	Granitoid, Louisville, Ky.....	June 29	July 2
	Granite Blocks, Richmond, Va.....	July 1	July 2
	Concrete Sidewalks, Ruston, La.....	June 26	July 2
	*Street Paving, San Antonio, Texas.....	June 20	June 25
Aug. 6	*Electric Wiring and Fixtures, Washington, D. C.....	July 7	July 9
	Paving and Sewers, Guyandotte, W. Va.....	July 13	July 16
Aug. 4	*Pave, Curb, etc., Rome, Ga.....	July 13	July 16
	Paving, Beaumont, Texas.....	July 14	July 16
Aug. 8	24 Miles Road, Boydton, Va.....	July 16	July 23
Aug. 8	13 Miles Road, Clinton, Tenn.....	July 18	July 23
Aug. 1	*Cement Sidewalks, Lafayette, La.....	July 20	July 23
	Cement Sidewalks, Tusculumbia, Ala.....	July 22	July 23
Aug. 10	*Granite Blocks, Spartanburg, S. C.....	July 22	July 23
Aug. 11	Grade, Asphalt, etc., Memphis, Tenn.....	July 22	July 23
Aug. 4	Paving, Curbing, etc., Ozark, Mo.....	July 22	July 23
	Concrete Paving, Henderson, Ky.....	July 21	July 23
Aug. 3	*Vitrified Brick and Asphalt, Elk City, Okla.....	July 25	July 30
Aug. 1	*Excavating and Grading, Portsmouth, Va.....	July 25	July 30
	*Street Improvements, Fayetteville, N. C.....	July 24	July 30
Aug. 15	*Hot Springs, Ark.....	July 29	July 30
Aug. 5	*Paving, Curbing, etc., Pensacola, Fla.....	July 29	July 30
Aug. 15	*Road, Jacksboro, Tenn.....	July 28	July 30
SEWER CONSTRUCTION.			
	Two Miles Mains, Winston-Salem, N. C.....	June 27	July 2
	Sewers and Paving, Guyandotte, W. Va.....	July 13	July 16
	System, Fitzgerald, Ga.....	July 14	July 16
Aug. 8	Toccoa, Ga.....	July 15	July 16
July 31	*Drain, Fort Barrancas, Fla.....	July 20	July 23
Aug. 3	*Webb City, Mo.....	July 20	July 23
	*Sewer Laterals, Muskogee, Okla.....	July 27	July 30
Aug. 5	*Storm Drains, Baltimore, Md.....	July 24	July 30
Aug. 14	*Sewer, Part of Comprehensive System, Louisville, Ky.....	July 23	July 30
Aug. 21	*Sewer, Part of Comprehensive System, Louisville, Ky.....	July 23	July 30
	System for School, Taylor, Texas.....	July 23	July 30
	Sewer System, Newton, Miss.....	July 28	July 30
Sept. 1	House Sewers, Vicksburg, Miss.....	July 28	July 30
WATER-WORKS.			
	Extension Mains, Fitzgerald, Ga.....	July 14	July 16
Aug. 3	*Artesian Well, Harrisonburg, La.....	July 17	July 23
	System for School, Conway, Ark.....	July 22	July 23
	*Richlands, Va.....	July 23	July 30
BANK AND OFFICE BUILDINGS.			
Jan.	Granade & Granade, Chatom, Ala.....	June 19	June 25
	Empire Construction Co., Birmingham, Ala., \$350,000.....	July 2	July 9
Sept. 1	People's Bank & Trust Co., Selma, Ala.....	July 16	July 23
	National City Bank, Birmingham, Ala.....	July 28	July 30
CHURCHES.			
Aug. 1	Chattanooga, Tenn., \$20,000.....	June 18	June 25
	Chattanooga, Tenn., \$12,000.....	June 18	June 25
	Mobile, Ala., \$78,000.....	June 18	June 25
	First Baptist Church, Paris, Ky.....	July 13	July 16
	Ensley, Ala.....	July 27	July 30
Aug. 19	Stamford, Texas.....	July 29	July 30
Aug. 15	San Antonio, Texas.....	July 29	July 30
COURTHOUSES.			
Aug. 11	Houston, Texas, \$500,000.....		June 18
	Martinsburg, W. Va.....	July 15	July 16
Aug. 10	Tusculumbia, Ala.....	July 20	July 23
GOVERNMENT AND STATE BUILDINGS.			
Aug. 19	U. S. Postoffice, etc., Extension, Petersburg, Va.....	July 13	July 16
Aug. 25	Library Addition, Richmond, Va.....	July 16	July 23
Aug. 5	Agricultural Hall, Auburn, Ala.....	July 22	July 23
HOTELS.			
	Pensacola (Fla.) Hotel Co., \$275,000.....	June 20	June 25

Date to open bids.
(When date is
not given it has
not been fixed.)

MISCELLANEOUS STRUCTURES.

Aug. 20	Masonic Temple, Brewton, Ala.....	June 29	July 2
	Jail, Accomac, Va.....	July 23	July 30
MUNICIPAL BUILDINGS.			
	City Market, Beaumont, Texas.....	July 14	July 16
Aug. 5	Library, Abilene, Texas.....	July 17	July 23
Aug. 4	Market, Beaumont, Texas.....	July 22	July 23
SCHOOLS.			
	Attalla, Ala.....	June 29	July 2
Aug. 1	University of Mississippi, University, Miss.....	June 25	July 2
Aug. 1	Mena, Ark.....	July 13	July 16
	Fort Worth, Texas.....	July 11	July 16
Aug. 12	Manning, S. C.....	July 9	July 16
Aug. 3	Bessemer, Ala.....	July 14	July 16
Aug. 7	Langston, Okla. (plans, not bids).....	July 14	July 16
Aug. 3	Perry, Fla.....	July 14	July 16
Sept. 8	Charleston, Miss.....	July 15	July 16
	Wise, Va.....	July 17	July 23
Aug. 15	Two Buildings, Radford, Va.....	July 22	July 23
Aug. 4	Gueydan, La.....	July 21	July 23
Aug. 4	Hagerstown, Md.....	July 27	July 30
Aug. 20	Plans, not bids, Natchez, Miss.....	July 27	July 30
Aug. 10	Chemical Laboratory, Baton Rouge, La.....	July 25	July 30
Aug. 10	Richmond, Ky.....	July 23	July 30
Aug. 10	Crawfordville, Ga.....	July 29	July 30
Aug. 6	Bessemer, Ala.....	July 29	July 30
Aug. 6	Fort Worth, Texas.....	July 28	July 30
Aug. 5	Thackerville, Okla.....	July 29	July 30
WAREHOUSES.			
	Childersburg, Ala. (Cotton).....	June 26	July 2
Aug. 1	Charleston, Miss.....	July 15	July 16

[Continued from Page 60.]

ders for machinery to be used in electric lighting and power plants and for other purposes. The Gregory booklet is ready for applicants.

"The Handshake."

"The Handshake" is the title of a little publication which will be issued every little while for the benefit of the customers and roofer friends of the Genuine Bangor Slate Co. of Easton, Pa. This company intends to make the booklet instructive as to the merits of slate for roofing and other purposes, and will endeavor to emphasize the points wherever possible by anecdotes that will amuse.

Continuous Roller Presses.

The number of uses to which the modern press can be adapted and the increasing demand of manufacturers for an apparatus combining all that is best and most durable for pressing garbage, offal, pulp and slushy materials, has prompted the Kutztown Foundry & Machine Co. of Kutztown, Pa., to put on the market the Edgerton continuous roller press. This system is peculiarly adapted to the separating and pressing of slushy materials, especially where sanitary conditions are required. It is fully described and the machinery is photographically illustrated in a book which the Kutztown company is now distributing. This company builds special machinery for garbage reduction, abattoirs, rendering plants, etc.

Stevens-Duryea Automobile for 1909.

One of the most successful automobiles of recent years has been the product of the Stevens-Duryea Company of Chicopee Falls, Mass. This company has made some changes and improvements tending to the refinement of its car rather than attempting any actual departure from the standard Stevens-Duryea construction, which latter has been found entirely satisfactory throughout the entire country. The Stevens-Duryea four-cylinder touring car, model X, for 1909 is described and illustrated in the company's new catalogue, now ready for mailing to those interested in the subject of motor cars that have been thoroughly tested in actual service and found efficient, strong and durable. Model X is now on the market, and has rapidly attained the same degree of popularity accorded the big and light six-cylinder Stevens-Duryea machines and the model R four-cylinder car of several years ago.

Reinforced Concrete Tested by Explosion.

The July number of the Trussed Concrete Bulletin presents interesting data on the shock resistance of reinforced concrete as tested by an explosion at the Prest-O-Lite Company's factory at Indianapolis, Ind. A photographic view of the effects of the explosion is presented, together with a description of the damage, showing how the damage to the roof of the building in which the explosion occurred was localized. The Prest-O-Lite Company says of the results: "We are indeed pleased with the splendid results demonstrated by this explosion, since fires resulting from such a cause have often resulted in a total wreck of the building; but in our case it only inconvenienced us for a short time. In fact, our force was

back to work in 30 minutes after the explosion." The Trussed Concrete Steel Co. of Detroit, Mich., invites inquiries for the bulletin mentioned.

COAL TRADE PICKING UP.

An Element in Reviving Activity at Charleston.

[Special Cor. Manufacturers' Record.]

Charleston, W. Va., July 25.

I was talking the other day with the manager of one of the most important coal-producing companies in the Kanawha field, and he told me that his company's business for June showed an increase of 10 per cent. over May, and for July it was running 10 per cent. more than in June. For May, June and July it is greater than for the corresponding months in 1906, though not as great as in 1907. Reports from the territory reached by way of the Great Lakes are to the effect that a great deal of coal must be sent up there to prevent a shortage during the winter months, and the impending demand will doubtless be provided for, which will increase the output in this field to a satisfactory amount. With coal production restored to normal everything else in this section will be given an impulse, so that the outlook for good trade generally is not at all gloomy.

The citizens of Charleston two weeks ago voted for a bond issue of \$300,000 for the purpose of paving some eight miles of streets, and the bonds will be offered for sale right away. As soon as they are sold the work of street improving will be put under way, and many men will be employed and much money put into circulation among local merchants and business men. The completion of this paving will probably make Charleston the best-paved city of its size in the country.

South Charleston continues to be the most active place of its years in all this region. One glass plant is going, another will blow in about August 15, the Kenton iron and steel mill is in operation, the Kanawha Chemical Manufacturing Co. is moving into its large new building, sidewalks are being paved with cement, and an average of six new dwelling-houses are being completed each week. Representatives of three manufacturing establishments were here during the present week looking over the situation with a view to removal, and it now appears more than likely that three large new plants will be under way in South Charleston before the lapse of many months. The three concerns will employ about 1000 men.

The piers for the big bridge over the Kanawha river between Charleston and

South Charleston have been completed, and the steel superstructure is being put in place. The completion of this structure will prove a great help to the new manufacturing town and to this city as well.

The National City Bank, one of the youngest banking institutions in the city, having begun business in March, 1907, has recently purchased a site for a banking house, and will soon begin its erection. It will be located at the corner of Kanawha and Capitol streets, directly across the latter from the Kanawha Valley Bank. The new building will be 10 stories in height, with the banking room on the first floor and offices on those above. It will be a handsome structure of steel and brick, fitted up with all the latest improvements.

Oil is the absorbing topic among the people of Charleston who like to take a chance, and thousands of acres of land have been put under lease during the past few weeks. Nor has the leasing business yet reached its end. Representatives of many of the big oil companies have been making headquarters here for some time, spending most of their time scouring the country for likely territory not yet taken up. The line the oil pool is supposed to follow crosses the Kanawha river some eight or ten miles below the city, so that if there is a continuous pool between the Green Creek territory and the Griffiths-ville territory, in both of which good wells have been struck, the development will come very close to Charleston. A number of test wells are being drilled along the line, and as some of them will be finished within a few days it is a matter of but a short time until the unknown will become the known, so far as the oil business is concerned.

St. Albans, the pretty town lying on the Kanawha river and the Chesapeake & Ohio Railroad, 12 miles west of Charleston, is going along at a rapid rate of progress. The town is at the junction of the Coal River branch of the Chesapeake & Ohio with the main line, and the railroad company has recently secured ground for terminals of considerable proportions, and, it is said, for repair shops for the branch line. Charleston and St. Albans capitalists, joining with some coal men from the New River field, have determined to build at St. Albans a nine-car factory and car-wheel foundry, and will, it is said, begin work at once. This will be a large concern, giving employment to a great many people, if the present plans of its promoters are carried to consummation.

The Kanawha & West Virginia Railroad, running from this city into the heart of the Blue Creek coal field, while intended originally for a coal road, has found such a demand for passenger facilities that it will run daily passenger trains from this city to the end of its line. The increase of population along the line of this road has rendered this movement imperative, notwithstanding the fact that for most of its length it parallels the Coal & Coke Railway, the Elk river only lying between them. The Kanawha & West Virginia, commonly known as the Blue Creek road, is a very new route, but it taps a fine coal field, and some excellent farming territory as well, which only needed transportation facilities to bring it into prominence.

GEO. BYRNE.

Big Electric Railway Plans.

The Roanoke Traction & Light Co. of Roanoke, Va., has been chartered by the Corporation Commission of that State, and it is stated that it proposes to build ultimately about 200 miles of electric railway, connecting Roanoke, Clifton Forge, Lynchburg and other points in Virginia; authorized capital \$2,000,000.

The charter was obtained by James P. Woods of Roanoke, who is president, the

other directors being R. C. Jackson, vice-president; James C. Martin, secretary and treasurer; W. W. Cox and Joseph H. Chitwood of Roanoke.

City Wants Plans for School.

The city of Natchez, Miss., will receive competitive plans until August 20 for the Carpenter Memorial School. The cost of the building, with lighting, heating and plumbing equipment, is not to exceed \$25,000. Address the Mayor.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD, Baltimore, Md., July 29.

During the past week the Baltimore stock market was not so active as the week before, yet prices were generally well sustained. In the trading United Railways common sold from 11½ to 11; do. income bonds, 54½ to 53½; do. funding 5s, 80 to 79½; do. scrip, 80 to 79; United 4s, 88 to 87; United Light & Power 4½s, 92; Consolidated Gas, Electric Light & Power preferred, 72½; do. 4½s, 77½ to 76½; Consolidated Gas 6s, 102½ to 103; do. 5s, 108½; do. 4½s, 93; Seaboard Company common, 7½ to 7; do. second preferred, 13½ to 13; Seaboard 4s, 58½ to 56½; do. 10-year 5s, 91½; Consolidated Cotton Duck, 7 to 7½; do. preferred, 24½ to 25; Mt. Vernon-Woodberry Cotton Duck 5s, 78½ to 78¾; G. B. S. Brewing 1sts, 46 to 44, last sale at 45.

Citizens' Bank sold at 33¼ to 33½; Continental Trust, 170; Maryland Casualty, 66 to 66½; Maryland Trust preferred, 83; United States Fidelity & Guaranty, 112 to 115; Mercantile Trust, 121½; Fidelity & Deposit, 125 to 126; Safe Deposit & Trust, 435; Union Bank, 120.

Other securities were traded in as follows: Atlantic Coast Line new 4s, certificates, 74½ to 75; Atlanta Consolidated Street Railway 5s, 102½; City & Suburban (Baltimore) 5s, 100; Houston Oil common, 9 to 8½; Atlantic Coast Line of Connecticut stock, 213 to 217; Atlantic Coast Line of Connecticut 4s, certificates, 72; Georgia & Alabama Consolidated 5s, 98 to 98½; Anacostia & Potomac 5s, 99½ to 101; do. guaranteed, 101½; Baltimore City 3½s, 1940, 96; do. do. 1930, 96½; do. 5s, 1916, W. L., 106½; Carolina Central 4s, 84 to 83½; Georgia Southern & Florida 5s, 102½; Northern Central Railway stock, 92½; Atlantic Coast Line Consolidated 4s, 92½; Georgia, Carolina & Northern 5s, 101½ to 101½; Norfolk Railway & Light 5s, 92; West Virginia Central 6s, 102½ to 102; Alabama Consolidated Coal & Iron 5s, 86; Consolidation Coal, 88; Reisterstown Turnpike, 3¼; Toledo Traction 5s, 86½; Consolidation Coal refunding 4½s, 93; German Fire Insurance Co., 16; Alabama Consolidated Coal & Iron common, 30; Baltimore City 3½s, 1927, 96; Virginia Electric Railway & Development 5s, 97.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended July 29, 1908.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast.....	100	94	
Atlantic Coast of Conn.....	100	215	220
Georgia Southern & Florida.....	100	10	
Maryland & Pennsylvania.....	100	20½	25
Seaboard Co. Com.....	100	6½	7½
Seaboard Co. 1st Pfd.....	100	28	
Seaboard Co. 2d Pfd.....	100	12½	13½
United Railways & Elec. Co.....	50	10½	11½
Western Maryland.....	50	5½	6
Bank Stocks.			
Citizens' National Bank.....	10	33	
First National Bank.....	100	120	130
German Bank.....	100	101	
National Bank of Baltimore.....	100	110	118

National Bank of Commerce.....	15	25	
National Howard Bank.....	10	12½	
National Union Bank of Md.....	100	120	121½
Third National Bank.....	100	115	
Western National Bank.....	20	34	
Trust, Fidelity and Casualty Stocks.			
Continental Trust.....	100	172	
Fidelity & Deposit.....	50	125	135
International Trust.....	100	115	150
Maryland Trust Pfd.....	100	82½	85
Merc. Trust & Deposit.....	50	120	130
Union Trust.....	50	60	
U. S. Fidelity & Guaranty.....	100	112	115½
Title Guaranty & Trust.....	115		
Miscellaneous Stocks.			
Ala. Con. Coal & Iron.....	100	30	35½
Ala. Con. Coal & Iron Pfd.....	100	70	
Con. Cotton Duck Com.....	50	7¼	7¾
Con. Cotton Duck Pfd.....	50	24½	25½
Con. Gas, Elec. Lt. & P. Com.....	100	21	
Con. Gas, Elec. Lt. & P. Pfd.....	100	71	80
Consolidation Coal.....	100	85	90
G. B. S. Brewing Co.....	100	4½	
George's Creek Coal.....	100	71½	

Railroad Bonds.			
Albany & Northern 5s, 1905.....	92½	95	
Atlanta & Charlotte Ext. 4s.....	95	99½	
Atlantic Coast Line 1st 4s, 1952.....	93		
Atlantic C. L. 4s, Cts., 1952.....	74½	75½	
Atlantic C. L. (Conn.) 5s, Cts., 1952.....	90		
Atlantic C. L. (Conn.) 4s, Cts., 1952.....	72		
Atlantic C. L. (S. C.) 4s, 1948.....	92½	94	
Augusta Terminal 6s.....	114		
Carolina Central 4s, 1948.....	85½	87	
Charlotte, Col. & Aug. 1st 5s, 1910.....	101	101½	
Coal & Iron Railway 5s, 1920.....	101	102½	
Col. & Green, 1st 6s, 1916.....	106½		
Georgia & Alabama 5s, 1945.....	98½	99	
Georgia, Car. & North, 1st 5s, 1929.....	101½	102	
Georgia Pacific 1st 6s, 1922.....	109		
Georgia South. & Fla. 1st 5s, 1945.....	102	102½	
Maryland & Pennsylvania 4s, 1951.....	86½		
Norfolk & Car. 5s, 1939.....	111	91	
Piedmont & Cum. 1st 5s, 1911.....	97		
Potomac Valley 1st 5s, 1941.....	100½		
Raleigh & Augusta 1st 6s, 1926.....	108½		
Richmond & Danville Gold 6s, 1915.....	105½		
Seaboard Air Line 4s, 1950.....	56½	57	
Seaboard Air Line 5s, 10-year, 1911.....	91	92	
Seaboard Air Line 5s, 3-year.....	92	93	
Seaboard & Roanoke 6s, 1916.....	106½		
Seaboard & Roanoke 5s, 1926.....	101		
South Bound 5s, 1911.....	101½		
Southern Railway Con. 5s, 1994.....	99		
Virginia Midland 6th.....	107	109½	
Virginia Midland 4th, 1921.....	103½	105½	
Virginia Midland 5th 5s, 1926.....	106	108	
Virginia Midland G. M. 5s.....	105½	107½	
Western N. C. Con. 6s, 1914.....	106	106½	
West Va. Cent. 1st 5s, 1911.....	102½	103½	
W. L. Col. & Aug. 6s, 1910.....	103		

Street Railway Bonds.			
Anacostia & Potomac 5s, 1949.....	100½	101	
Anacostia & Potomac 5s, Guar.....	102	103	
Augusta Ry. & Elec. 5s, 1940.....	99		
Baltimore City Pass. 5s, 1911.....	101		
Balto., Sp. Pt. & Ches. 4½s.....	92½	93	
Baltimore Traction 1st 5s, 1929.....	108½		
Balto. Trac. (N. B. Div.) 5s, 1942.....	113		
Central Ry. Con. 5s (Balto.), 1932.....	111		
Central Ry. Ext. 5s (Balto.), 1932.....	111½		
Central Railway 6s.....	110		
Charleston Con. Elec. 5s, 1999.....	100		
City & Suburban 5s (Balto.), 1922.....	108	109	
City & Suburban 5s (Wash.), 1948.....	102		
Knoxville Traction 1st 5s, 1928.....	101		
Lake Roland Elevated 5s, 1942.....	115	115½	
Lexington Railway 1st 5s, 1949.....	90		
Mass. Ry. & L. Co. 5s, 1953.....	91½	93½	
Memphis Street Railway 5s.....	89½	91	
Norfolk Railway & Light 5s.....	92	92½	
Richmond Traction 5s.....	100½		
United Railways 1st 4s, 1949.....	87½	87½	
United Railways Inc. 4s, 1949.....	53½	54½	
United Railways Funding 5s.....	79½	80	

Miscellaneous Bonds.			
Ala. Con. Coal & Iron 5s.....	87		
Atlanta Gas 1st 5s, 1947.....	103		
Baltimore Electric 6s, 1910.....	86	87½	
Consolidated Gas 6s, 1910.....	102½	103	
Consolidated Gas 5s, 1939.....	108		
Consolidated Gas 4½s.....	92½	93	
Consolidated Gas 4½s, Cts.....	96		
Con. Gas, Elec. Lt. & P. 4½s.....	76	76½	
G. B. S. Brewing 1st 4s.....	44½	45	
G. B. S. Brewing Inc. 4s.....	15	16½	
Mt. Vernon-Woodberry Cot. Duck 5s.....	78½	79	
United Elec. Lt. & P. 4½s.....	90½	92	

SOUTHERN COTTON-MILL STOCKS.

Quotations furnished by Hugh MacBain & Co., Wilmington, N. C., for Week Ending July 27.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	81	
Alken Mfg. Co. (S. C.).....	85	
American Spinning Co. (S. C.).....	145	
Anderson Cotton Mills (S. C.).....	70	
Arkwright Mills (S. C.).....	103	110
Augusta Factory (Ga.).....	65	70
Avondale Mills (Ala.).....	110	125
Belton Mills (S. C.).....	105	110
Bibb Mfg. Co. (Ga.).....	114	
Brandon Mills (S. C.).....	125	
Cabarrus Cotton Mills (N. C.).....	110	130
Chadwick-Hoskins Mills (N. C.) Pfd.....	100	
Chilola Mfg. Co. (S. C.).....	125	
Clifton Mfg. Co. (S. C.) Pfd.....	102	108
Clinton Cotton Mills (S. C.).....	99½	
Columbus Mfg. Co. (Ga.).....	120	
Courtenay Mfg. Co. (S. C.).....	97½	
Dallas Mfg. Co. (Ala.).....	90	95
Darlington Mfg. Co. (S. C.).....	78	80
Drayton Mills (S. C.).....	100	
Eagle & Phenix Mills (Ga.).....	125	137½
Easley Cotton Mills (S. C.).....	145	
Enoree Mfg. Co. (S. C.).....	69	80
Enterprise Mfg. Co. (S. C.) Pfd.....	100	
Enterprise Mfg. Co. (Ga.).....	82	90
Exposition Cotton Mills (Ga.).....	240	
Gaffney Mfg. Co. (S. C.).....	80	
Gainesville Cotton Mills (S. C.).....	47	56
Granby Cot. Mills (S. C.) 1st Pfd.....	45	
Graniteville Mfg. Co. (S. C.).....	160	165
Greenwood Cotton Mills (S. C.).....	90	
Grendel Mills (S. C.).....	111	118
Henrietta Mills (N. C.).....	160	175
King Mfg. Co. John P. (Ga.).....	102	
Lancaster Cotton Mills (S. C.).....	110	125
Lancaster Cot. Mills (S. C.) Pfd.....	91	96
Langley Mfg. Co. (S. C.).....	91	96
Laurens Cotton Mills (S. C.).....	148	
Limestone Mills (S. C.).....	141	
Lockhart Mills (S. C.).....	85	
Lockhart Mills (S. C.) Pfd.....	97	
Loray Mills (N. C.).....	90	
Marion Cotton Mills (S. C.).....	80	85
Mare Mills (N. C.).....	165	185
Mills Mfg. Co. (S. C.).....	110	

Mills Mfg. Co. (S. C.) Pfd.....	110	
Monaghan Mills (S. C.).....	113	
Monarch Cotton Mills (S. C.).....	102	
Newberry Cotton Mills (S. C.).....	145	
Norris Cotton Mills (S. C.).....	120	
Olympia Cotton Mills (S. C.) Pfd.....	68	
Orangeburg Mfg. Co. (S. C.) Pfd.....	80	98
Orr Cotton Mills (S. C.).....	104	
Pacolet Mfg. Co. (S. C.).....	150	
Pacolet Mfg. Co. (S. C.) Pfd.....	97	100
Pelzer Mfg. Co. (S. C.).....	165	167½
Piedmont Mfg. Co. (S. C.).....	175	176
Poe Mfg. Co. (S. C.).....	120	124
Raleigh Cotton Mills (N. C.).....	100	
Richland Cot. Mills (S. C.) Pfd.....	55	
Roanoke Mills (N. C.).....	120	
Saxon Mills (S. C.).....	125	
Sibley Mfg. Co. (Ga.).....	60	63
Spartan Mills (S. C.).....	135	145
Springstein Mills (S. C.).....	100	
Tucapau Mills (S. C.).....	196	
Union Mfg. Co. (Ga.).....	140	
Union-Buttall Mills (S. C.).....	54	60
Victor Mfg. Co. (S. C.).....	120	134
Warren Mfg. Co. (S. C.).....	100	93½
Warren Mfg. Co. (S. C.) Pfd.....	100	
Washington Mills (Va.).....	25	
Washington Mills (Va.) Pfd.....	100	110
Whitney Mfg. Co. (S. C.).....	140	
Williamston Mills (S. C.).....	106	111
Wiscasset Mills (N. C.).....	125	135
Woodruff Cotton Mills (S. C.).....	125	130
Woodside Cotton Mills (S. C.).....	100	104

Quotations furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending July 27.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	80	
Aetna Cotton Mills (S. C.) Pfd.....	80	
Alken Mfg. Co. (S. C.).....	82	
American Spinning Co. (S. C.).....	145	
Anderson Cotton Mills (S. C.).....	75	
Aracella Mills (S. C.).....	95	100
Arkwright Cotton Mills (S. C.).....	100	
Augusta Factory (Ga.).....	65	70
Avondale Mills (Ala.).....	107	
Belton Mills (S. C.).....	103	107
Brandon Mills (S. C.).....	125	
Brogan Mills (S. C.).....	24	
Cabarrus Cotton Mills (N. C.).....	125	
Chadwick Mfg. Co. (N. C.) Pfd.....	103	
Chilola Mfg. Co. (S. C.).....	125	
Clifton Mfg. Co. (S. C.).....	103	107
Clifton Mfg. Co. (S. C.) Pfd.....	101	
Clifton Cotton Mills (S. C.).....	100	120
Columbus Mfg. Co. (Ga.).....	94	98
Courtenay Mfg. Co. (S. C.).....	100	
Dallas Mfg. Co. (Ala.).....	90	95
Darlington Mfg. Co. (S. C.).....	80	85
D. E. Converse Co. (S. C.).....	112	
Drayton Mills (S. C.).....	100	
Eagle & Phenix Mills (Ga.).....	130	135
Easley Cotton Mills (S. C.).....	145	150
Enoree Mfg. Co. (S. C.).....	70	82
Enoree Mfg. Co. (S. C.) Pfd.....	100	102
Enterprise Mfg. Co. (Ga.).....	82	90
Exposition Cotton Mills (Ga.).....	225	
Gaffney Mfg. Co. (S. C.).....	70	75
Gainesville Cotton Mills (Ga.).....	60	
Glenwood Cotton Mills (S. C.).....	122	
Gluck Mills (S. C.).....	90	98
Granby Cot. Mills (S. C.) 1st Pfd.....	50	
Graniteville Mfg. Co. (S. C.).....	160	165
Greenwood Cotton Mills (S. C.).....	90	94
Grendel Mills (S. C.).....	112	115
Henrietta Cotton Mills (S. C.).....	124	
Henrietta Mills (N. C.).....	105	110
Inman Mills (S. C.).....	103	115
King Mfg. Co., J. P. (Ga.).....	97	102
Lancaster Cotton Mills (S. C.).....	109	
Lancaster Cot. Mills (S. C.) Pfd.....	92	99
Langley Mfg. Co. (S. C.).....	92	96
Laurens Mills (S. C.).....	150	162
Limestone Mills (S. C.).....	140	150
Lockhart Mills (S. C.).....	75	78
Lockhart Mills (S. C.) Pfd.....	101	
Loray Cotton Mills (N. C.) Pfd.....	90	100
Lytle Cotton Mills (S. C.).....	80	90
Mallory Mfg. Co. (S. C.).....	105	
Mollohan Mfg. Co. (S. C.).....	100	
Monaghan Mills (S. C.).....	112	
Monarch Cotton Mills (S. C.).....	90	
Newberry Cotton Mills (S. C.).....	127	
Ninety-Six Cotton Mills (S. C.).....	115	120
Norris Cotton Mills (S. C.).....	117	122
(Oell) Mfg. Co. (N. C.).....	70	90
Olympia Cotton Mills (S. C.).....	70	90
Pacolet Cotton Mills (S. C.).....	100	105
Pacolet Mfg. Co. (S. C.).....	150	165
Pacolet Mfg. Co. (S. C.) Pfd.....	99	104
Pelzer Mfg. Co. (S. C.).....	167	175
Piedmont Mfg. Co. (S. C.).....	170	
Poe Mfg. Co., F. W. (S. C.).....	125	130
Saxon Mills (S. C.).....	118	125
Shibley Mfg. Co. (Ga.).....	68	63
Spartan Mills (S. C.).....	135	145
Stapleton Mfg. Co. (Ga.).....	132	140
Tucupaa Mills (S. C.).....	200	70
Union-Buttola (S. C.) 1st Pfd.....	70	
Union-Buttola (S. C.) 2d Pfd.....	20	25
Victor Mfg. Co. (S. C.).....	120	
Warren Mfg. Co. (S. C.).....	90	97
Warren Mfg. Co. (S. C.) Pfd.....	102	107
Washington Mills (Va.).....	20	25
Washington Mills (Va.) Pfd.....	100	105
Watts Mills (S. C.).....	101	140
Watts Mfg. Co. (S. C.).....	104	106
Williamston Mills (S. C.).....	104	
Willamsett Mills (N. C.).....	127	
Woodruff Cotton Mills (S. C.).....	120	125
Woodside Cotton Mills (S. C.).....	105	110

	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4	8	8 1/4	8 1/2	8 3/4	9	9 1/4	9 1/2	9 3/4	10	10 1/4	10 1/2	10 3/4	11	11 1/4	11 1/2	11 3/4	12	12 1/4	12 1/2	12 3/4	13	13 1/4	13 1/2	13 3/4	14	14 1/4	14 1/2	14 3/4	15	15 1/4	15 1/2	15 3/4	16	16 1/4	16 1/2	16 3/4	17	17 1/4	17 1/2	17 3/4	18	18 1/4	18 1/2	18 3/4	19	19 1/4	19 1/2	19 3/4	20	20 1/4	20 1/2	20 3/4	21	21 1/4	21 1/2	21 3/4	22	22 1/4	22 1/2	22 3/4	23	23 1/4	23 1/2	23 3/4	24	24 1/4	24 1/2	24 3/4	25	25 1/4	25 1/2	25 3/4	26	26 1/4	26 1/2	26 3/4	27	27 1/4	27 1/2	27 3/4	28	28 1/4	28 1/2	28 3/4	29	29 1/4	29 1/2	29 3/4	30	30 1/4	30 1/2	30 3/4	31	31 1/4	31 1/2	31 3/4	32	32 1/4	32 1/2	32 3/4	33	33 1/4	33 1/2	33 3/4	34	34 1/4	34 1/2	34 3/4	35	35 1/4	35 1/2	35 3/4	36	36 1/4	36 1/2	36 3/4	37	37 1/4	37 1/2	37 3/4	38	38 1/4	38 1/2	38 3/4	39	39 1/4	39 1/2	39 3/4	40	40 1/4	40 1/2	40 3/4	41	41 1/4	41 1/2	41 3/4	42	42 1/4	42 1/2	42 3/4	43	43 1/4	43 1/2	43 3/4	44	44 1/4	44 1/2	44 3/4	45	45 1/4	45 1/2	45 3/4	46	46 1/4	46 1/2	46 3/4	47	47 1/4	47 1/2	47 3/4	48	48 1/4	48 1/2	48 3/4	49	49 1/4	49 1/2	49 3/4	50	50 1/4	50 1/2	50 3/4	51	51 1/4	51 1/2	51 3/4	52	52 1/4	52 1/2	52 3/4	53	53 1/4	53 1/2	53 3/4	54	54 1/4	54 1/2	54 3/4	55	55 1/4	55 1/2	55 3/4	56	56 1/4	56 1/2	56 3/4	57	57 1/4	57 1/2	57 3/4	58	58 1/4	58 1/2	58 3/4	59	59 1/4	59 1/2	59 3/4	60	60 1/4	60 1/2	60 3/4	61	61 1/4	61 1/2	61 3/4	62	62 1/4	62 1/2	62 3/4	63	63 1/4	63 1/2	63 3/4	64	64 1/4	64 1/2	64 3/4	65	65 1/4	65 1/2	65 3/4	66	66 1/4	66 1/2	66 3/4	67	67 1/4	67 1/2	67 3/4	68	68 1/4	68 1/2	68 3/4	69	69 1/4	69 1/2	69 3/4	70	70 1/4	70 1/2	70 3/4	71	71 1/4	71 1/2	71 3/4	72	72 1/4	72 1/2	72 3/4	73	73 1/4	73 1/2	73 3/4	74	74 1/4	74 1/2	74 3/4	75	75 1/4	75 1/2	75 3/4	76	76 1/4	76 1/2	76 3/4	77	77 1/4	77 1/2	77 3/4	78	78 1/4	78 1/2	78 3/4	79	79 1/4	79 1/2	79 3/4	80	80 1/4	80 1/2	80 3/4	81	81 1/4	81 1/2	81 3/4	82	82 1/4	82 1/2	82 3/4	83	83 1/4	83 1/2	83 3/4	84	84 1/4	84 1/2	84 3/4	85	85 1/4	85 1/2	85 3/4	86	86 1/4	86 1/2	86 3/4	87	87 1/4	87 1/2	87 3/4	88	88 1/4	88 1/2	88 3/4	89	89 1/4	89 1/2	89 3/4	90	90 1/4	90 1/2	90 3/4	91	91 1/4	91 1/2	91 3/4	92	92 1/4	92 1/2	92 3/4	93	93 1/4	93 1/2	93 3/4	94	94 1/4	94 1/2	94 3/4	95	95 1/4	95 1/2	95 3/4	96	96 1/4	96 1/2	96 3/4	97	97 1/4	97 1/2	97 3/4	98	98 1/4	98 1/2	98 3/4	99	99 1/4	99 1/2	99 3/4	100	100 1/4	100 1/2	100 3/4	101	101 1/4	101 1/2	101 3/4	102	102 1/4	102 1/2	102 3/4	103
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